APPENDIX B

CHAIN-OF-CUSTODY AND WASTE MANIFESTS

Chain of Custody Documentation

CHAIN OF CUSTODY

SR#: 1250249 7

Columbia Analytical Services INC.
An Employee - Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

PAGE 1 OF 6 COC #

PROJECT NAME: NOVATO BALLFIELDS
PROJECT NUMBER: G486063
PROJECT MANAGER: TRAVIS WILLIAMSON
COMPANY/ADDRESS: BATTELLE, 505 KING AVE
CITY/STATE/ZIP: COLUMBUS OH 43201
E-MAIL ADDRESS: WILLIAMSONT@BATTELLE.ORG
PHONE #: 614-424-4796 FAX#:
SAMPLER'S SIGNATURE: Enrique Bolton

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐	Volatile Organics 624☐ 8260☒	Hydrocarbons (*see below) Gas☐	BTEX☐ 8021☐	Diesel☐ Oil☐	Fuel Fingerprint (FIQ)☐ NW-HCID Screen☐	Oil & Grease/TRPH 1664 HEM☐	1664 SGT☐	PCB's Aroclors☐	Congeners☐	Pesticides/Herbicides 608☐ 8081A☐	8141A☐	8151A☐	Chlorophenolics - 8151M Tri☐ Tetra☐	PCP☐	PAHS 8310☐	SIM☐	Metals, Total or Dissolved (See list below) 7010/7470	Cyanide☐	Hex-Chrom☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020☐	AOX 1650☐ 506☐	TPH-G 8015B	TPH-D 8015B			REMARKS
TO63-R2-SB04-0-0.5	4.6.05	1400	1	SO	3		✓	✓														✓							✓	✓				
TO63-R2-SB04-3-4	4.6.05	1400	2	SO	3		✓	✓														✓							✓	✓				
TO63-R2-SB01-0-0.5	4.6.05	1425	3	SO	3		✓	✓														✓							✓	✓				
TO63-R2-SB01-0-0.5Dup	4.6.05	1425	4	SO	3		✓	✓														✓							✓	✓				
TO63-R2-SB01-1-2	4.6.05	1425	5	SO	3		✓	✓														✓							✓	✓				
TO63-R1-SB04-0-0.5	4.6.05	1515	6	SO	3		✓	✓														✓							✓	✓				
TO63-R1-SB04-4-5	4.6.05	1515	7	SO	3		✓	✓														✓							✓	✓				
TO63-R1-SB01-0-0.5	4.6.05	1530	8	SO	3		✓	✓														✓							✓	✓				
TO63-R1-SB03-0-0.5	4.6.05	1540	9	SO	3		✓	✓														✓							✓	✓				
TO63-R1-SB03-4-5	4.6.05	1540	10	SO	3		✓	✓														✓							✓	✓				

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
X III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
X V. EDD

INVOICE INFORMATION

P.O. # 191113
Bill To: P.M

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

METALS = CAM17

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Enrique Bolton	Signature:	Signature:	Signature:
Date/Time: 4.6.05	Date/Time: 4/7/05 1022	Date/Time:	Date/Time:
Printed Name: ENRIQUE BOLTON	Printed Name:	Printed Name:	Printed Name:
Firm: BATTELLE	Firm: CAS	Firm:	Firm:

RCOC #1 06/03

CHAIN OF CUSTODY

SR#: K2502497

Columbia Analytical Services INC.
An Employee - Owned Company

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PAGE 2 OF 6 COC #

PROJECT NAME: NOVATO BALLFIELDS
PROJECT NUMBER: G486063
PROJECT MANAGER: TRAVIS WILLIAMSON
COMPANY/ADDRESS: BATTELLE
505 KING AVE
CITY/STATE/ZIP: COLUMBUS OH 43201
E-MAIL ADDRESS: WILLIAMSONT@BATTELLE.ORG
PHONE #: 614 424 4796 FAX#:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☒	Volatile Organics 624 ☐ 8260 ☒ B 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐	Fuel Fingerprint (FIQ) ☐ NW-HCID Screen ☐	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below) 7015/7470	Cyanide ☐ Hex-Chrom ☐	pH, Cond., Cl, SO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	TPH-G 8015B	TPH-D 8015B			REMARKS
TO63-R4-SB04-0-0.5	4.6.05	1030	11	SO	3	✓	✓								✓					✓	✓			
TO63-R4-SB04-4-5	4.6.05	1030	12	SO	3	✓	✓								✓					✓	✓			
TO63-R5-SB04-0-0.5	4.6.05	1100	13	SO	3	✓	✓								✓					✓	✓			
TO63-R5-SB04-5.6	4.6.05	1100	14	SO	3	✓	✓								✓					✓	✓			
TO63-R5-SB02-0-0.5	4.6.05	1115	15	SO	3	✓	✓								✓					✓	✓			
TO63-R5-SB02-3-4	4.6.05	1115	16	SO	3	✓	✓								✓					✓	✓			
TO63-R5-SB01-0-0.5	4.6.05	1130	17	SO	3	✓	✓								✓					✓	✓			
TO63-R5-SB03-0-0.5	4.6.05	1140	18	SO	3	✓	✓								✓					✓	✓			
TO63-R2-SB03-0-0.5	4.6.05	1330	19	SO	3	✓	✓								✓					✓	✓			
TO63-R2-SB02-0-0.5	4.6.05	1345	20	SO	3	✓	✓								✓					✓	✓			

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
X III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
X V. EDD

INVOICE INFORMATION

P.O. # 19113
Bill To: PM

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.
____ 5 Day
X Standard (10-15 working days)
____ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

* METALS = CAM 17

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature: [signature]	Signature:	Signature:
Date/Time: 4.6.05	Date/Time: 4/7/05 1020	Date/Time:	Date/Time:
Printed Name: ENTIRE BELOW	Printed Name: [illegible] (A)	Printed Name:	Printed Name:
Firm: BATTELLE	Firm:	Firm:	Firm:

RCOC #1 06/03

Columbia Analytical Services Inc. PC 24
Cooler Receipt and Preservation Form

Project/Client Battelle Work Order K250 2497

Cooler received on 4.7.05 and opened on 4.7.05 by A. Snell

1. Were custody seals on outside of coolers? Y (N)
   If yes, how many and where?
2. Were custody seals intact? ~~Y~~ ~~N~~
3. Were signature and date present on the custody seals? ~~Y~~ ~~N~~
4. Is the shipper's airbill available and filed? If no, record airbill number: enclosed (Y) N
5. COC#

			encores	
Temperature of cooler(s) upon receipt: (°C)	5.8	5.6	0.0	
Temperature Blank: (°C)	6.6	*10.3	NA	

Were samples hand delivered on the same day as collection? ~~Y~~ ~~N~~

6. Were custody papers properly filled out (ink, signed, etc.)? (Y) N
7. Type of packing material present bwrap, boxes w/ inserts, ice
8. **Did all bottles arrive in good condition (unbroken)?** (Y) N
9. Were all bottle labels complete (i.e analysis, preservation, etc.)? (Y) N
10. Did all bottle labels and tags agree with custody papers? Y (N)
11. **Were the correct types of bottles used for the tests indicated?** (Y) N
12. Were all of the preserved bottles received at the lab with the appropriate pH? ~~Y~~ ~~N~~
13. Were VOA vials checked for absence of air bubbles, and if present, noted below? ~~Y~~ ~~N~~
14. Did the bottles originate from CAS/K or a branch laboratory? (Y) N
15. **Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?** ~~Y~~ ~~N~~
16. Was C12/Res negative? ~~Y~~ ~~N~~

Explain any discrepancies: *1 - Limited volume in temp blank. Difficult to get correct reading 1-8oz Rec'd for RSP-SB03-5.6 labeled RSP-SB03-0.5 - on bottle. Placed by process of elimination + time. / Encore Rec'd labeled R4-SB03-0.5-. Should be R4-SB03-3.4. Placed by interval(ft) section on label. ~~All samples~~ Rec'd for 1-8oz R4-SB04-4-5 Rec'd labeled R4-SB04-4-6. Placed by process of elimination

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

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An Employee - Owned Company

CHAIN OF CUSTODY

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PAGE 5 OF 6 SR#: K2502449 COC #

PROJECT NAME: NOVATO BALLFIELDS
PROJECT NUMBER: 9486063
PROJECT MANAGER: TRAVIS WILLIAMSON
COMPANY/ADDRESS: 505 KING AVE.
CITY/STATE/ZIP: COLUMBUS, OH, 43201
E-MAIL ADDRESS: WILLIAMSONT@BATTELLE.ORG
PHONE #: 6144244796 FAX#: 6144587796
SAMPLER'S SIGNATURE: Emily Bhor

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☒	Volatile Organics 624☐ 8260☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	BTEX☐ 8021☐	Fuel Fingerprint (FIQ)☐ NW-HCID Screen☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCB's Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081A☐ 8141A☐ 8151A☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	PAHS 8310☐ SIM☐	Metals, Total or Dissolved CAM17 (See list below) 6010/7470	Cyanide☐ Hex-Chrom☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020☐ AOX 1650☐ 506☐	EXPLOSIVES 8330				REMARKS
TD63 191-SB03-0-0.5	4.5.05	0840	1	SO	1											✓					✓				
TD63 191-SB01-0-0.5	4.5.05	0915	2	SO	1											✓					✓				
TD63 191-SB02-0-0.5	4.5.05	0935	3	SO	1											✓					✓				
TD63 193-SB01-0-0.5	4.5.05	0950	4	SO	1											✓					✓				
TD63 193-SB03-0-0.5	4.5.05	1015	5	SO	3											✓					✓				EXTRA VOLUME FOR MS/MSD (1)
TD63 193-SB03-0.5DUP	4.5.05	1015	6	SO	1											✓					✓				
TD63 193-SB02-0-0.5	4.5.05	1045	7	SO	1											✓					✓				
TD63 SPN-SB02-0-0.5	4.5.05	1115	8	SO	1	✓										✓									
TD63 SPN-SB02-4-5	4.5.05	1115	9	SO	1	✓										✓									
TD63 SPN-SB03-0-0.5	4.5.05	1400	10	SO	1	✓										✓									

8

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
X III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
X V. EDD

INVOICE INFORMATION

P.O. # K91113
Bill To: PROJECT MANAGER

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.
____ 5 Day
X Standard (10-15 working days)
____ Provide FAX Results
____ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg
Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

* METALS = CAM17
(1) EXTRA SOIL VOLUME PROVIDED FOR LAB QC (MS-MSD)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Emily Bhor	Signature: Travis Hack	Signature:	Signature:
Date/Time: 4.6.05	Date/Time: 4/7/05 1100	Date/Time:	Date/Time:
Printed Name: EMILY BHOR	Printed Name: Hack	Printed Name:	Printed Name:
Firm: BATTELLE	Firm: CAS	Firm:	Firm:

RCOC #1 06/03

CHAIN OF CUSTODY

Columbia Analytical Services INC.
An Employee - Owned Company

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SR#: K2502499

PAGE 6 OF 6 COC #

PROJECT NAME: NOVATO BALLFIELDS
PROJECT NUMBER: G486063
PROJECT MANAGER: TRAVIS WILLIAMSON
COMPANY/ADDRESS: BATTELLE
505 KING AVE
CITY/STATE/ZIP: COLUMBUS OH 43201
E-MAIL ADDRESS: WILLIAMSONT@BATTELLE.ORG
PHONE #: 614 424 4796 FAX#:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☒	Volatile Organics 624 ☐ 8260 ☒ B 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐	☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below) TDS/TSS	Cyanide ☐ Hex-Chrom ☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle) NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	TPH-G 8015B	TPH-D 8015B			REMARKS
TO63-R1-SB02-0-0.5	4.6.05	1550	11	SO	3		✓	✓								✓						✓	✓			
TO63-R1-SB01-0-0.5DUP	4.6.05	1530	12	SO	3		✓	✓								✓						✓	✓			
TO63-PDD-SB01-0-0.5	4.4.05	1330	13	SO	1											✓										
TO63-PDD-SB02-0-0.5	4.4.05	1430	14	SO	1											✓										
TO63-PDD-SB03-0-0.5	4.4.05	1500	15	SO	1											✓										
TO63-PDD-SB04-0-0.5	4.4.05	1515	16	SO	1											✓										
TO63-PDD-SB05-0-0.5	4.4.05	1530	17	SO	1											✓										

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
X III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
X V. EDD

INVOICE INFORMATION

P.O. # 19113
Bill To: PM

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

METALS = CAM 17

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature: [signature]	Signature:	Signature:
Date/Time: 4.6.05	Date/Time: 4/7/05 1100	Date/Time:	Date/Time:
Printed Name: ENRIQUE BELOSO	Printed Name: [signature]	Printed Name:	Printed Name:
Firm: BATTELLE	Firm: CAS	Firm:	Firm:

RCOC #1 06/03

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC Ynela

Project/Client Battelle Work Order K250 2499

Cooler received on 4.7.05 and opened on 4.7.05 by A. Snell

1.	Were custody seals on outside of coolers?				Y	(N)
	If yes, how many and where?					
2.	Were custody seals intact?				~~Y~~	~~N~~
3.	Were signature and date present on the custody seals?				~~Y~~	~~N~~
4.	Is the shipper's airbill available and filed? If no, record airbill number: enclosed				(Y)	N
5.	COC#			Encores		
	Temperature of cooler(s) upon receipt: (°C)	5.8	5.6	0.0		
	Temperature Blank: (°C)	6.6	*10.3	NA		
	Were samples hand delivered on the same day as collection?				~~Y~~	~~N~~
6.	Were custody papers properly filled out (ink, signed, etc.)?				(Y)	N
7.	Type of packing material present: bwrap, boxes w/ inserts, ice					
8.	**Did all bottles arrive in good condition (unbroken)?**				(Y)	N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?				(Y)	N
10.	Did all bottle labels and tags agree with custody papers?				Y	(N)
11.	**Were the correct types of bottles used for the tests indicated?**				(Y)	N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?				~~Y~~	~~N~~
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?				~~Y~~	~~N~~
14.	Did the bottles originate from CAS/K or a branch laboratory?				(Y)	N
15.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**				~~Y~~	~~N~~
16.	Was C12/Res negative?				~~Y~~	~~N~~

Explain any discrepancies: #1 - Limited volume in temp blank. Difficult to get correct Reading
1-8oz Recd for RSP-SB03-5.6 labeled RSP-SB03-0.5- on bottle. Placed by
process of elimination + time. / Encore Recd labeled R4-SB03-0.5-. Should be
R4-SB03-3-4. Placed by interval(ft) section on label. ~~All samples~~ Recd for
1-8oz
R4-SB04-4-5 Recd labeled R4-SB04-4-6.
Placed by process of elimination

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

CHAIN OF CUSTODY

Columbia Analytical Services INC.
An Employee - Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

SR#: 1625 2505

PAGE 3 OF 6 COC #

PROJECT NAME	NOVATO BALLFIELDS
PROJECT NUMBER	G4860063
PROJECT MANAGER	TRAVIS WILLIAMSON
COMPANY/ADDRESS	BATTELLE 505 KING AVE
CITY/STATE/ZIP	COLUMBUS OH 43201
E-MAIL ADDRESS	WILLIAMSONT@BATTELLE.ORG
PHONE #	614/424/4796 FAX#
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☒	Volatile Organics 624☐ 8260☒ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Fuel Fingerprint (FIQ) ☐ NW-HCID Screen ☐	Oil & Grease/TRPH 1664 SGT☐ 1664 HEM☐	PCB's Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081A☐ 8141A☐ 8151A☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	PAHS 8310☐ SIM☐	Metals, Total or Dissolved (See list below) (6210/ 3420	Cyanide☐ Hex-Chrom☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020☐ AOX 1650☐ 506☐	TPH-G 80153	TPH-D 80153			REMARKS
063 R3-SB04-0-0.5	4.6.05	815	1	SO	3		✓	✓								✓					✓	✓			
063 R3-SB04-2-3	4.6.05	820	2	SO	3		✓	✓								✓					✓	✓			
063 R3-SB01-0-0.5	4.6.05	900	3	SO	3		✓	✓								✓					✓	✓			
063 R3-SB01-4.5	4.6.05	900	4	SO	3		✓	✓								✓					✓	✓			
063 R3-SB02-0-0.5	4.6.05	910	5	SO	3		✓	✓								✓					✓	✓			
063 R3-SB03-0-0.5	4.6.05	910	6	SO	3		✓	✓								✓					✓	✓			
063 R4-SB03-0-0.5	4.6.05	1000	7	SO	3		✓	✓								✓					✓	✓			
063 R4-SB03-3-4	4.6.05	1000	8	SO	3		✓	✓								✓					✓	✓			
063 R4-SB02-0-0.5	4.6.05	1010	9	SO	3		✓	✓								✓					✓	✓			
063 R4-SB01-0-0.5	4.6.05	1015	10	SO	3		✓	✓								✓					✓	✓			

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

X III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

X V. EDD

INVOICE INFORMATION

P.O. # 19113

Bill To: PM

TURNAROUND REQUIREMENTS

____ 24 hr. ____ 48 hr.

____ 5 Day

X Standard (10-15 working days)

____ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

METALS = CAM17

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature: [signature]	Signature:	Signature:
Date/Time: 4.6.05	Date/Time: 4/7/05 1000	Date/Time:	Date/Time:
Printed Name: ENRIQUE BERROS	Printed Name: [signature]	Printed Name:	Printed Name:
Firm: BATTELLE	Firm: CAS	Firm:	Firm:

RCOC #1 06/03

CHAIN OF CUSTODY

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SR#: 12502505

PAGE 4 OF 6 COC #

PROJECT NAME: NOVATC BALLFIELDS
PROJECT NUMBER: G4186063
PROJECT MANAGER: TRAVIS WILLIAMSON
COMPANY/ADDRESS: 505 KING AVE
CITY/STATE/ZIP: COLUMBUS OH 43201
E-MAIL ADDRESS: WILLIAMSONT@BATTELLE.ORG
PHONE #: 6144244796 FAX#: 6144584796
SAMPLER'S SIGNATURE: Enrique Bellos

	SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☒	Volatile Organics 624 ☐ 8260 ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐	Fuel Fingerprint (FIQ) ☐ NW-HCID Screen ☐	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved CAM 17 * (See list below) 6010/7420	Cyanide ☐ Hex-Chrom ☐	pH, Cond., Cl, SO_4, F, PO_4, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	REMARKS
063	SPN-SB03-4-5	4.5.05	1400	11	SO	1		✓								✓						
063	SPN-SB01-0-0.5	4.5.05	1440	12	SO	1		✓								✓						
063	SPN-SB01-0-0.5DUP	4.5.05	1440	13	SO	1		✓								✓						
063	SPN-SB01-3-4	4.5.05	1440	14	SO	1		✓								✓						
063	RSP-SB02-0-0.5	4.5.05	1520	15	SO	1		✓								✓						
063	RSP-SB02-5-6	4.5.05	1520	16	SO	1		✓								✓						
063	RSP-SB03-0-0.5	4.5.05	1600	17	SO	1		✓								✓						
063	RSP-SB03-5-6	4.5.05	1600	18	SO	1		✓								✓						

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
X III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
X V. EDD

INVOICE INFORMATION

P.O. # 191113
Bill To: P.M

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:
* METALS CAM 17

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Enrique Bellos	Signature: Alan Klatt	Signature:	Signature:
Date/Time: 4.6.05	Date/Time: 4/7/05 1008	Date/Time:	Date/Time:
Printed Name: ENRIQUE BELLOS	Printed Name: ALAN KLATT	Printed Name:	Printed Name:
Firm: BATTELLE	Firm: CAS	Firm:	Firm:

RCOC #1 06/03

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC LH

Project/Client Battelle Work Order K250 2505

Cooler received on 4.7.05 and opened on 4.7.05 by A. Juell

1.	Were custody seals on outside of coolers?					Y	(N)
	If yes, how many and where?						
2.	Were custody seals intact?					~~Y~~	~~N~~
3.	Were signature and date present on the custody seals?					~~Y~~	~~N~~
4.	Is the shipper's airbill available and filed? If no, record airbill number: enclosed					(Y)	N
5.	COC#			encores			
	Temperature of cooler(s) upon receipt: (°C)	5.8	5.6	0.0			
	Temperature Blank: (°C)	6.6	*10.3	NA			
	Were samples hand delivered on the same day as collection?					~~Y~~	~~N~~
6.	Were custody papers properly filled out (ink, signed, etc.)?					(Y)	N
7.	Type of packing material present Bwrap, boxes w/ inserts, ice						
8.	**Did all bottles arrive in good condition (unbroken)?**					(Y)	N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?					(Y)	N
10.	Did all bottle labels and tags agree with custody papers?					Y	(N)
11.	**Were the correct types of bottles used for the tests indicated?**					(Y)	N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?					~~Y~~	~~N~~
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?					~~Y~~	~~N~~
14.	Did the bottles originate from CAS/K or a branch laboratory?					(Y)	N
15.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**					~~Y~~	~~N~~
16.	Was C12/Res negative?					~~Y~~	~~N~~

Explain any discrepancies: #1 - Limited volume in temp blank. Difficult to get correct Reading
1-8oz Recid for RSP-SB03-5.6 labeled RSP-SB03-0.5- on bottle. Placed by
process of elimination + time. / encore Recid labeled R4-SB03-0.5-. Should be
R4-SB03-3-4. Placed by interval(ft) section on label. ~~All samples~~ Recid for 1-8oz
R4-SB04-4-5 Recid labeled R4-SB04-4-6.
Placed by process of elimination

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

CHAIN OF CUSTODY

SR#: K250271

PAGE 1 OF 2 COC #

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PROJECT NAME: Novato Ballfields
PROJECT NUMBER: 64906063
PROJECT MANAGER: Travis Williamson
COMPANY/ADDRESS: Battelle
505 King Ave
CITY/STATE/ZIP: Columbus OH 43601
E-MAIL ADDRESS: williamsont@battelle.org
PHONE #: 614 424 4796 FAX#: 614 458 3906
SAMPLER'S SIGNATURE: Mary Hawker

	SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☑ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☑ 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☑ Diesel ☑ Oil ☐ TPH	Fuel Fingerprint (FIQ) ☐ NW-HCID ☐	Oil & Grease/TRPH 1664 SGT ☐ 1664 HEM ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐	Hex-Chrom ☐	pH, Cond, Cl, SO_4, P O_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	EX 8015/Mes 8330				REMARKS
1163	R3-GW01-ER	4/6/05	840	1	GW	9	✓	✓	✓						✓	✓										
1163	R3-GW01	4/6/05	915	2	GW	27	✓	✓	✓						✓	✓										extra volume for MS/MSD
1163	R3-GW01-DUP	4/6/05	915	3	GW	9	✓	✓	✓						✓	✓										
1163	R4-GW01	4/6/05	1045	4	GW	9	✓	✓	✓						✓	✓										
1163	R5-GW01	4/6/05	1315	5	GW	9	✓	✓	✓						✓	✓										
1163	R3-GW01-FB	4/6/05	915	6	GW	3		✓																		
[illegible]	~~R1-GW01-DUP~~	~~4/6/05~~	1340		GW	1																✓				
1163	R2-GW01	4/6/05	1610	7	GW	9	✓	✓	✓						✓	✓										
1163	R1-GW01	4/6/05	1650	8	GW	9	✓	✓	✓						✓	✓										

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
X III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
X V. EDD

INVOICE INFORMATION

P.O. # 191113
Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results
___ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al (As) (Sb) (Ba) (Be) B Ca (Cd) (Co) (Cr) (Cu) Fe (Pb) Mg Mn (Mo) (Ni) K (Ag) Na (Se) Sr (Tl) Sn (V) (Zn) (Hg)

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK (CA) WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:
SVOCs include PAHs
CAM 17 metals
EDD same as Novato project

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Mary Hawker 4/7/05 900	4/8/05 1000		
Signature / Date/Time	Signature / Date/Time	Signature / Date/Time	Signature / Date/Time
Printed Name / Firm	Printed Name / Firm	Printed Name / Firm	Printed Name / Firm

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SR#: K2502571

PAGE 2 OF 2 COC #

PROJECT NAME
PROJECT NUMBER
PROJECT MANAGER Sam Williamson
COMPANY/ADDRESS Battelle 614 424 4779
CITY/STATE/ZIP
E-MAIL ADDRESS
PHONE # FAX#
SAMPLER'S SIGNATURE

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☑ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☑ 8021 ☐	Hydrocarbons (*see below) Gas ☐ Diesel ☑ Oil ☐	Fuel Fingerprint (FIQ) NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHs 8310 ☐ SIM ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐	Hex-Chrom ☐	pH, Cond, Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	Exp 10 Sites 8330			REMARKS
063 SPN-GW01	4/5/05	1410	9	GW	2	✓									✓									
063 RINSATE-02	4/5/05	1710	10	GW	2	✓									✓						✓			
063 RSP-GW01	4/5/05	1620	11	GW	2	✓									✓									
063 RINSATE-01	4/4/05	1640	12	GW	1										✓									
063 193-GW01-DUP	4/5/05	1340	13	GW	1																✓			
063 193-GW01	4/5/05	1340	14	GW	1																✓			
063 191-GW01	4/5/05	1330	15	GW	1																✓			
063 TRIP BLANK			16	GW	2																			
063 T063-IDW-01	4/7/05	755		SO	7	✓	✓	✓							✓									

on Rec'd USR FA

5 Day TAT

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
X III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
X V. EDD

INVOICE INFORMATION

P.O. # 19113
Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al (As) (Sb) (Ba) (Be) B Ca (Cd) (Co) (Cr) (Cu) Fe (Pb) Mg Mn (Mo) (Ni) K (Ag) Na (Se) Sr (Tl) Sn (V) (Zn) (Hg)

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

CAM 17 metals
SVOCs include PAH
T063-IDW-01 please provide 5-day turnaround for this soil sample

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Mary Hawkins	Signature:	Signature:	Signature:
Date/Time: 4/7/05 900	Date/Time: 4/8/05 1000	Date/Time:	Date/Time:
Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm:	Firm: CTS	Firm:	Firm:

RCOC #1 06/03

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC Greg

Project/Client Battelle Work Order K250 2571

Cooler received on 4/8/05 and opened on 4/8/05 by TBlanke

1.	Were custody seals on outside of coolers?				Y	N
	If yes, how many and where?					
2.	Were custody seals intact?				Y	N
3.	Were signature and date present on the custody seals?				Y	N
4.	Is the shipper's airbill available and filed? If no, record airbill number:				Y	N
5.	COC#					
	Temperature of cooler(s) upon receipt: (°C)	5.6	6.3	0.6	2.7	
	Temperature Blank: (°C)	5.1	5.8	1.0	1.0	
	Were samples hand delivered on the same day as collection?				Y	N
6.	Were custody papers properly filled out (ink, signed, etc.)?				Y	N
7.	Type of packing material present	loose ice - bags - bmwrap - mesh				
8.	**Did all bottles arrive in good condition (unbroken)?**				Y	N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?				Y	N
10.	Did all bottle labels and tags agree with custody papers?				Y	N
11.	**Were the correct types of bottles used for the tests indicated?**				Y	N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?				Y	N
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?				Y	N
14.	Did the bottles originate from CAS/K or a branch laboratory?				Y	N
15.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**				Y	N
16.	Was C12/Res negative?				Y	N

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

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Columbia Analytical Services INC.
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April 25, 2005 Service Request No: K2502554

Travis Williamson
Battelle Memorial Institute
505 King Avenue
Columbus, OH 43201-2693

RE: Novato Ballfields/G486063

Dear Travis:

Enclosed are the results of the rush sample(s) submitted to our laboratory on April 8, 2005. For your reference, these analyses have been assigned our service request number K2502554.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3376.

Respectfully submitted,

Columbia Analytical Services, Inc.

Gregory Salata, Ph.D.
Project Chemist

GS/afs

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Battelle Memorial Institute	**Service Request No.:**	K2502554
Project:	Novato Ballfields/G486063	**Date Received:**	04/08/05
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One soil sample was received for analysis at Columbia Analytical Services on 04/08/05. The sample was received in good condition and consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Total Metals

Matrix Spike Recovery Exceptions:
The matrix spike recovery of Antimony for sample TO63-IDW-01 was below the CAS control criterion. Antimony recoveries are generally low for soil and sediment samples when digested using EPA Method 3050. Despite anticipated low recoveries, the method is still generally prescribed because of it's versatility for general metals analyses. Antimony results (in conjunction with the matrix spike recovery) from this procedure should only be used as indicators to estimate concentrations. Since low recoveries result from a method defect and can be magnified by certain matrix components, no corrective action is appropriate other than using alternative procedures which specifically target Antimony. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicate the analysis was in control.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for the replicate analysis of Cobalt in sample TO63-IDW-01 was outside the normal CAS control limits. The variability in the results is attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

No other anomalies associated with the analysis of these samples were observed.

Diesel Range Organics by EPA Method 8015B

No anomalies associated with the analysis of these samples were observed.

Gasoline Range Organics by EPA Method 8015B

No anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260B

Initial Calibration (ICAL) Exceptions:
The primary evaluation criterion was exceeded for Bromomethane, Cyclohexane, and Methylcyclohexane in ICAL ID CAL4367. In accordance with CAS standard operating procedures, the alternative evaluation specified in the

Approved by _____ **Date** 4/25/05

EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 7.9%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270C

Initial Calibration (ICAL) Exceptions:
The primary evaluation criterion was exceeded for 1,2,4-Trichlorobenzene, Hexachlorocyclopentadiene, 4-Nitrophenol, and Pentachlorophenol in ICAL ID CAL4375. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 6.2%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

Method Blank Exceptions:
The Method Blank KWG0505755-7 contained low levels of Di-n-butyl Phthalate above the Method Reporting Limit (MRL). In accordance with CAS QA/QC policy, all sample results less than twenty times the level found in the Method Blank are flagged as estimated.

Surrogate Exceptions:
The upper control criterion was exceeded for the Terphenyl-d14 surrogate in Method Blank KWG0505755-7. The surrogate recovery was 1% above the upper control criterion. The data quality is not significantly affected. No further corrective action was taken.

No other anomalies associated with the analysis of these samples were observed.

Approved by Gregory Salata **Date** 4/25/05

Chain of Custody Documentation

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF CUSTODY

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SR#: 12502554

PAGE 2 OF 2 COC #

PROJECT NAME
PROJECT NUMBER
PROJECT MANAGER Sam Williamson
COMPANY/ADDRESS Battelle 614 424 4779
CITY/STATE/ZIP
E-MAIL ADDRESS
PHONE # FAX#
SAMPLER'S SIGNATURE

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☑ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☐ 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☑ Diesel ☐ Oil ☐	Fuel Fingerprint (FIQ) NW-HCID Screen Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	Metals; Total or Dissolved (See list below)	Cyanide ☐	Hex-Chrom ☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle)	NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	Exp 10 yrs 8330				REMARKS
SPN-GW01	4/5/05	1410		GW	2	✓								✓										
RINSATE-02	4/5/05	1710		GW	2	✓								✓						✓				
RSP-GW01	4/5/05	1620		GW	2	✓								✓										
RINSATE-01	4/4/05	1640		GW	1									✓										
193-GW01-DUP	4/5/05	1340		GW	1															✓				
193-GW01	4/5/05	1340		GW	1															✓				
191-GW01	4/5/05	1330		GW	1															✓				
TRIP BLANK				GW	2																			
T063-IDW-01	4/7/05	755	1	SO	7	✓	✓	✓						✓										5 Day TAT

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
X III. Data Validation Report (includes all raw data)
___ IV. CLP Deliverable Report
X V. EDD

INVOICE INFORMATION
P.O. # 191113
Bill To:

TURNAROUND REQUIREMENTS
___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard (10-15 working days)
___ Provide FAX Results
Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al (As) (Sb) (Ba) (Be) B Ca (Cd) (Co) (Cr) (Cu) Fe (Pb) Mg Mn (Mo) (Ni) K (Ag) Na (Se) Sr (Tl) Sn (V) (Zn) (Hg)

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

CAM 17 metals
SVOCs include PAH
T063-IDW-01 please provide 5-day turnaround for this soil sample

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Mary Hawkins 4/7/05 900	4/8/05 1000		
Signature / Date/Time	Signature / Date/Time	Signature / Date/Time	Signature / Date/Time
Printed Name / Firm	Printed Name / Firm (CAS)	Printed Name / Firm	Printed Name / Firm

BCOC #1 06/03

8

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC Alley

Project/Client Battelle Work Order K250 2054

Cooler received on 4/8/05 and opened on 4/8/05 by TBlanke

1.	Were custody seals on outside of coolers?				Y	N
	If yes, how many and where?					
2.	Were custody seals intact?				Y	N
3.	Were signature and date present on the custody seals?				Y	N
4.	Is the shipper's airbill available and filed? If no, record airbill number:				Y	N
5.	COC#					
	Temperature of cooler(s) upon receipt: (°C)	5.6	6.3	0.6	2.7	
	Temperature Blank: (°C)	5.1	5.8	1.0	1.0	
	Were samples hand delivered on the same day as collection?				Y	N
6.	Were custody papers properly filled out (ink, signed, etc.)?				Y	N
7.	Type of packing material present	bubble - bags . bmap - mesh				
8.	**Did all bottles arrive in good condition (unbroken)?**				Y	N
9.	Were all bottle labels complete (i.e analysis, preservation, etc.)?				Y	N
10.	Did all bottle labels and tags agree with custody papers?				Y	N
11.	**Were the correct types of bottles used for the tests indicated?**				Y	N
12.	Were all of the preserved bottles received at the lab with the appropriate pH?				Y	N
13.	Were VOA vials checked for absence of air bubbles, and if present, noted below?				Y	N
14.	Did the bottles originate from CAS/K or a branch laboratory?				Y	N
15.	**Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?**				Y	N
16.	Was C12/Res negative?				Y	N

SHORT HOLD TIME
RUSH

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

Total Solids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Battelle Memorial Institute
Project: Novato Ballfields/G486063
Sample Matrix: Soil

Service Request: K2502554

Total Solids

Prep Method: NONE
Analysis Method: 160.3M
Test Notes:

Units: PERCENT
Basis: Wet

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
TO63-IDW-01	K2502554-001	04/07/2005	04/08/2005	04/11/2005	69.1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Battelle Memorial Institute	**Service Request:**	K2502554
Project:	Novato Ballfields/G486063	**Date Collected:**	04/07/2005
Sample Matrix:	Soil	**Date Received:**	04/08/2005
		Date Analyzed:	04/11/2005

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
TO63-IDW-01	K2502554-001	69.1	73.7	71.4	6	

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Method 160.3 - Total Solids

Group ID:	KWG0505819				
Analyst:	RMcKee			**Reviewed By:**	MLF
Date Acquired:	04/11/2005 19:22	**Oven TempStart:**	103 DEG C	**Date Reviewed:**	4/12/05
Date Completed:	04/12/2005 11:08	**Oven TempEnd:**	103 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
1	K2502510-002	(20149) SWQA	SEDIMENT	1.23g	9.25g	6.64g	67.5		
2	K2502554-001	TO63-IDW-01	SOIL	1.24g	6.77g	5.06g	69.1		
3	K2502580-001	0500975-01 P1-1A	SOIL	1.24g	7.93g	6.82g	83.4		
4	K2502580-002	0500975-02 P1-1B	SOIL	1.24g	7.37g	6.38g	83.8		
5	K2502580-003	0500975-03 P1-2A	SOIL	1.25g	8.61g	7.42g	83.8		
6	K2502580-004	0500975-04 P1-2B	SOIL	1.24g	8.63g	7.33g	82.4		
7	K2502580-005	0500975-05 P1-3A	SOIL	1.25g	9.20g	7.92g	83.9		
8	K2502580-006	0500975-06 P1-3B	SOIL	1.26g	9.94g	8.69g	85.6		
9	K2502580-007	0500975-07 P1-4A	SOIL	1.25g	8.91g	7.62g	83.2		
10	K2502580-008	0500975-08 P1-4B	SOIL	1.25g	9.27g	7.85g	82.3		
11	K2502580-009	0500975-09 P1-5A	SOIL	1.26g	8.88g	7.58g	82.9		
12	K2502580-010	0500975-10 P1-6A	SOIL	1.25g	7.63g	6.45g	81.5		
13	K2502580-011	0500975-11 P2-1A	SOIL	1.25g	9.49g	8.42g	87.0		
14	K2502580-012	0500975-12 P2-2A	SOIL	1.25g	9.12g	8.31g	89.7		
15	K2502580-013	0500975-13 P2-2B	SOIL	1.25g	8.35g	7.32g	85.5		
16	K2502580-014	0500975-14 P2-3A	SOIL	1.25g	7.35g	6.69g	89.2		
17	K2502580-015	0500975-15 P2-3B	SOIL	1.25g	7.37g	6.86g	91.7		
18	K2502580-016	0500975-16 P2-3C	SOIL	1.25g	7.89g	6.94g	85.7		
19	K2502580-017	0500975-17 P2-4A	SOIL	1.26g	8.99g	7.78g	84.3		
20	K2502580-018	0500975-18 P2-4B	SOIL	1.26g	8.17g	7.04g	83.6		
21	K2502580-019	0500975-19 PaD2-1B	SOIL	1.26g	8.61g	7.74g	88.2		
22	K2502580-020	0500975-20 PaD2-1C	SOIL	1.25g	7.60g	6.86g	88.3		
23	K2502580-021	0500975-21 3P-1A	SOIL	1.24g	7.72g	6.68g	84.0		
24	K2502580-022	0500975-22 3P-1B	SOIL	1.24g	10.32g	8.71g	82.3		
25	K2502580-023	0500975-23 3P-2A	SOIL	1.24g	7.45g	6.12g	78.6		
26	K2502580-024	0500975-24 3P-2B	SOIL	1.25g	5.77g	5.02g	83.4		

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Group ID:	KWG0505819		
Analyst:	RMcKee	**Reviewed By:**	MSF
Date Acquired:	04/11/2005 19:22	**Oven TempStart:**	103 DEG C
Date Completed:	04/12/2005 11:08	**Oven TempEnd:**	103 DEG C
		Date Reviewed:	4/12/05

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
27	K2502580-025	0500975-25 3P-3A	SOIL	1.26g	8.91g	7.38g	80.0		
28	K2502580-026	0500975-26 3P-3B	SOIL	1.24g	11.36g	8.74g	74.1		
29	K2502580-027	0500975-27 3P-4A	SOIL	1.24g	10.26g	8.28g	78.0		
30	K2502580-028	0500975-28 3P-4B	SOIL	1.24g	9.78g	7.72g	75.9		
31	K2502580-029	0500975-29 3P-5A	SOIL	1.25g	8.23g	6.98g	82.1		
32	K2502580-030	0500975-30 3P-6A	SOIL	1.25g	8.88g	7.52g	82.2		
33	K2502600-003	SLDS-001	MISC	1.23g	8.44g	6.34g	70.9		
34	K2502600-004	SLDS-002	MISC	1.23g	5.83g	3.37g	46.5		
35	K2502600-005	SLDS-003(P)	MISC	1.23g	5.91g	4.68g	73.7		
36	K2502601-001	C2	SOIL	1.24g	4.92g	4.22g	81.0		
37	K2502601-002	E5	SOIL	1.23g	6.50g	6.37g	97.5		
38	KWG0505819-1	Duplicate Client Sample	SOIL	1.24g	6.61g	5.77g	84.4	K2502580-001	
39	KWG0505819-2	Duplicate Client Sample	SOIL	1.25g	8.58g	7.23g	81.6	K2502580-010	
40	KWG0505819-3	Duplicate Client Sample	SOIL	1.26g	11.18g	10.03g	88.4	K2502580-020	
41	KWG0505819-4	Duplicate Client Sample	MISC	1.26g	9.50g	7.07g	70.5	K2502600-003	
42	KWG0505819-5	Duplicate Client Sample	SEDIMENT	1.26g	6.96g	5.08g	67.0	K2502510-002	
43	KWG0505819-6	Duplicate Client Sample	SOIL	1.25g	8.44g	6.55g	73.7	K2502554-001	

Metals

METALS

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

Sample No.	Lab Sample ID.
TO63-IDW-01	K2502554-001
TO63-IDW-01D	K2502554-001D
TO63-IDW-01S	K2502554-001S
Method Blank	K2502554-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

Signature: Date: 4/19/05

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Battelle Memorial Institute
Project No.: G486063
Project Name: Novato Ballfields
Matrix: SOIL

Service Request: K2502554
Date Collected: 04/07/05
Date Received: 04/08/05
Units: MG/KG
Basis: Dry

Sample Name: TO63-IDW-01
Lab Code: K2502554-001

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	0.02	5	4/14/05	4/15/05	0.11		N
Arsenic	200.8	1.03	0.15	10	4/12/05	4/14/05	7.75		
Barium	6010B	1.0	0.2	2	4/14/05	4/19/05	79.1		
Beryllium	6010B	1.03	0.03	2	4/14/05	4/19/05	0.54	B	
Cadmium	6010B	1.0	0.1	2	4/14/05	4/19/05	0.4	B	
Chromium	200.8	0.41	0.06	10	4/12/05	4/14/05	59.4		
Cobalt	6010B	2.1	0.3	2	4/14/05	4/19/05	17.1		*
Copper	6010B	2.1	2.1	2	4/14/05	4/19/05	24.5		
Lead	200.8	0.10	0.04	10	4/12/05	4/14/05	12.8		
Mercury	7471A	0.016	0.006	1	4/11/05	4/12/05	0.057		
Molybdenum	6010B	2.1	2.1	2	4/14/05	4/19/05	2.1	U	
Nickel	200.8	0.41	0.06	10	4/12/05	4/14/05	44.1		
Selenium	200.8	2.1	0.4	10	4/12/05	4/14/05	0.5	B	
Silver	200.8	0.021	0.003	5	4/14/05	4/15/05	2.760		
Thallium	200.8	0.041	0.004	10	4/12/05	4/14/05	0.133		
Vanadium	6010B	2.1	0.6	2	4/14/05	4/19/05	52.5		
Zinc	6010B	2.1	0.3	2	4/14/05	4/19/05	71.5		

% Solids: 69.1

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

Client: Battelle Memorial Institute
Project No.: G486063
Project Name: Novato Ballfields
Matrix: SOIL

Service Request: K2502554
Date Collected:
Date Received:
Units: MG/KG
Basis: Dry

Sample Name: Method Blank
Lab Code: K2502554-MB

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.05	0.02	5	4/14/05	4/15/05	0.02	U	N
Arsenic	200.8	0.50	0.07	5	4/12/05	4/14/05	0.07	U	
Barium	6010B	1.0	0.2	2	4/14/05	4/19/05	0.2	U	
Beryllium	6010B	1.00	0.03	2	4/14/05	4/19/05	0.03	U	
Cadmium	6010B	1.0	0.1	2	4/14/05	4/19/05	0.1	U	
Chromium	200.8	0.20	0.03	5	4/12/05	4/14/05	0.16	B	
Cobalt	6010B	2.0	0.3	2	4/14/05	4/19/05	0.3	U	*
Copper	6010B	2.0	2.0	2	4/14/05	4/19/05	2.0	U	
Lead	200.8	0.05	0.02	5	4/12/05	4/14/05	0.02	U	
Mercury	7471A	0.020	0.008	1	4/11/05	4/12/05	0.008	U	
Molybdenum	6010B	2.0	2.0	2	4/14/05	4/19/05	2.0	U	
Nickel	200.8	0.20	0.03	5	4/12/05	4/14/05	0.04	B	
Selenium	200.8	1.0	0.2	5	4/12/05	4/14/05	0.2	U	
Silver	200.8	0.020	0.003	5	4/14/05	4/15/05	0.003	U	
Thallium	200.8	0.020	0.002	5	4/12/05	4/14/05	0.002	U	
Vanadium	6010B	2.0	0.6	2	4/14/05	4/19/05	0.7	B	
Zinc	6010B	2.0	0.3	2	4/14/05	4/19/05	0.3	U	

% Solids: 100.0

Comments:

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

ICV Source: Inorganic Ventures CCV Source: Various

Concentration Units: ug/l

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	25.0	25.6	102	25.0	25.3	101	25.3	101	200.8
Arsenic	25.0	26.5	106	25.0	25.2	101	25.6	102	200.8
Barium	5000	5160	103	2500	2530	101	2570	103	6010B
Beryllium	125	128	102	125	128	102	131	105	6010B
Cadmium	1250	1200	96	500	494	99	494	99	6010B
Chromium	10.0	10.2	102	25.0	25.1	100	25.4	102	200.8
Cobalt	1250	1250	100	500	500	100	509	102	6010B
Copper	625	593	95	500	484	97	492	98	6010B
Lead	25.0	26.0	104	25.0	25.0	100	25.0	100	200.8
Mercury	5.0	5.47	109	5.0	5.18	104	5.27	105	7471A
Molybdenum	2000	2020	101	500	495	99	499	100	6010B
Nickel	25.0	25.5	102	25.0	25.1	100	25.5	102	200.8
Selenium	25.0	27.4	110	25.0	25.5	102	25.7	103	200.8
Silver	12.5	12.7	102	25.0	25.0	100	25.0	100	200.8
Thallium	25.0	26.0	104	25.0	25.3	101	25.1	101	200.8
Vanadium	1250	1230	98	500	486	97	489	98	6010B
Zinc	1250	1220	98	500	495	99	501	100	6010B

METALS
- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

ICV Source: CCV Source: Various

Concentration Units: ug/I

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.0	5.17	103	5.12	102	7471A

METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

Concentration Units: ug/I

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.10	0.11	111		
Arsenic				1.0	1.01	101		
Barium				5.0	5.30	106		
Beryllium				5.0	4.96	99		
Cadmium				5.0	4.67	93		
Chromium				0.40	0.42	106		
Cobalt				10	10.8	108		
Copper				10	8.99	90		
Lead				0.04	0.04	99		
Mercury	0.20	0.124	62					
Molybdenum				10	2.84	28		
Nickel				0.40	0.36	91		
Selenium				2.0	2.07	104		
Silver				0.04	0.042	104		
Thallium				0.04	0.040	100		
Vanadium				10	9.23	92		
Zinc				10	9.18	92		

METALS
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BLANKS

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Antimony	0.04	U	0.04	U	0.04	U							200.8
Arsenic	0.14	U	0.14	U	0.14	U							200.8
Barium	1.0	U	1.0	U	1.0	U							6010B
Beryllium	0.15	U	0.15	U	0.15	U							6010B
Cadmium	0.5	U	0.5	U	0.5	U							6010B
Chromium	0.06	U	0.06	U	0.06	U							200.8
Cobalt	1.5	U	1.5	U	1.5	U							6010B
Copper	10.0	U	10.0	U	10.0	U							6010B
Lead	0.04	U	0.04	U	0.04	U							200.8
Mercury	0.080	U	0.080	U	0.08	U	0.188	B					7471A
Molybdenum	10.0	U	10.0	U	10.0	U							6010B
Nickel	0.06	U	0.06	U	0.07	B							200.8
Selenium	0.4	U	0.4	U	0.4	U							200.8
Silver	0.006	U	0.006	U	0.007	B							200.8
Thallium	0.006	B	0.004	U	0.004	B							200.8
Vanadium	4.1	B	4.3	B	3.0	U							6010B
Zinc	1.5	U	1.5	U	1.5	U							6010B

METALS
- 3 -
BLANKS

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C		Preparation Blank	C		Method
Mercury			0.087	B									7471A

METALS
- 4 -
ICP INTERFERENCE CHECK SAMPLE

Client: Battelle Memorial Institute

Service Request:K2502554

Project No.: G486063

Project Name: Novato Ballfields

ICP ID Number: Excell ICPMS

ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony			0.09	0.11				
Arsenic		20	-0.03	20.3	102			
Chromium		20	0.21	19.3	97			
Lead			0.12	0.12				
Nickel		20	0.08	19.1	96			
Selenium			-0.0	-0.1				
Silver		20	0.004	18.2	91			
Thallium			0.005	0.003				

METALS
- 4 -
ICP INTERFERENCE CHECK SAMPLE

Client: Battelle Memorial Institute

Service Request:K2502554

Project No.: G486063

Project Name: Novato Ballfields

ICP ID Number: TJA Iris ICP

ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Barium		500	-1.2	436	87			
Beryllium		500	0.31	470	94			
Cadmium		1000	1.8	840	84			
Cobalt		500	-2.9	426	85			
Copper		500	-10.0	445	89			
Molybdenum			-6.7	-9.4				
Vanadium		500	2.8	440	88			
Zinc		1000	9.2	843	84			

METALS
- 5a -
SPIKE SAMPLE RECOVERY

Client: Battelle Memorial Institute
Service Request: K2502554

Project No.: G486063
Units: mg/kg

Project Name: Novato Ballfields
Basis: Dry

Matrix: SOIL
% Solids: 69.1

Sample Name: TO63-IDW-01S
Lab Code: K2502554-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	34.7		0.11		103	34	N	200.8
Arsenic	70 - 130	101		7.75		103	91		200.8
Barium	73 - 129	538		79.1		411	112		6010B
Beryllium	86 - 119	11.0		0.54	B	10.3	102		6010B
Cadmium	55 - 147	10.4		0.4	B	10.3	97		6010B
Chromium	70 - 130	99.4		59.4		41.3	97		200.8
Cobalt	85 - 114	113		17.1		103	93		6010B
Copper	59 - 144	70.8		24.5		51.3	90		6010B
Lead	70 - 130	128		12.8		103	112		200.8
Mercury	61 - 129	0.499		0.057		0.400	110		7471A
Molybdenum	66 - 125	92.2		2.1	U	103	90		6010B
Nickel	70 - 130	138		44.1		103	91		200.8
Selenium	70 - 130	96.5		0.5	B	103	93		200.8
Silver	70 - 130	10.1		2.760		10.3	71		200.8
Thallium	70 - 130	101		0.133		103	98		200.8
Vanadium	79 - 124	150		52.5		103	95		6010B
Zinc	51 - 148	169		71.5		103	95		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
- 6 -
DUPLICATES

Client: Battelle Memorial Institute
Service Request: K2502554

Project No.: G486063
Units: mg/kg

Project Name: Novato Ballfields
Basis: Dry

Matrix: SOIL
% Solids: 69.1

Sample Name: TO63-IDW-01D
Lab Code: K2502554-001D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		0.11		0.11		4		200.8
Arsenic	30	7.75		5.73		30		200.8
Barium	30	79.1		74.8		6		6010B
Beryllium		0.54	B	0.50	B	7		6010B
Cadmium		0.4	B	0.5	B	12		6010B
Chromium	30	59.4		63.7		7		200.8
Cobalt	30	17.1		12.5		31	*	6010B
Copper	30	24.5		25.4		4		6010B
Lead	30	12.8		15.5		19		200.8
Mercury		0.057		0.071		21		7471A
Molybdenum		2.1	U	2.0	U			6010B
Nickel	30	44.1		43.7		1		200.8
Selenium		0.5	B	0.6	B	8		200.8
Silver	30	2.760		2.710		2		200.8
Thallium		0.133		0.140		5		200.8
Vanadium	30	52.5		46.7		12		6010B
Zinc	30	71.5		67.5		6		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS

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LABORATORY CONTROL SAMPLE

Client: Battelle Memorial Institute

Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source: ERA Lot #246

Analyte	Aqueous mg/L			Solid (mg/kg)				
	True	Found	%R	True	Found	C Limits		%R
Antimony				32.6	29.6	0.0500	68.1	91
Arsenic				187	185	139	235	99
Barium				177	213	137	218	120
Beryllium				45.0	52.6	35.3	54.8	117
Cadmium				64.0	70.0	49.2	78.7	109
Chromium				144	136	115	173	94
Cobalt				212	244	168	255	115
Copper				92.7	99.4	75.9	109	107
Lead				125	124	95.2	155	99
Mercury				1.49	1.54	0.852	2.12	103
Molybdenum				47.9	53.7	36.7	59.2	112
Nickel				78.0	77.5	61.1	94.9	99
Selenium				154	152	114	194	99
Silver				90.0	92.4	67.0	113	103
Thallium				84.5	85.7	48.4	121	101
Vanadium				173	194	118	228	112
Zinc				273	290	211	335	106

METALS
- 9 -
ICP SERIAL DILUTIONS

Client: Battelle Memorial Institute
Service Request: K2502554
Project No.: G486063
Units: ug/L
Project Name: Novato Ballfields

Sample Name: TO63-IDW-01L
Lab Code: K2502554-001L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Differ-	Q	Method
Barium	383		380		1		6010B
Beryllium	2.61	B	2.85	B	9		6010B
Cadmium	2.11	B	2.50	U			6010B
Cobalt	82.9		79.7		4		6010B
Copper	118		125		6		6010B
Molybdenum	10.0	U	50.0	U			6010B
Vanadium	254		239		6		6010B
Zinc	346		348		1		6010B

METALS
-10-
METHOD DETECTION LIMITS

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

ICP/ICP-MS ID #:

GFAA ID #: AA ID #: CETAC-1

Analyte	Wave-length	Back-ground	MRL (ug/L)	MDL (ug/L)	Method
Mercury	253.70	BD	0.200	0.080	7471A

Comments _____

METALS
-10-
METHOD DETECTION LIMITS

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

ICP/ICP-MS ID #: Excell ICPMS

GFAA ID #: AA ID #:

Analyte	Mass	Back-ground	MRL (ug/L)	MDL (ug/L)	Method
Antimony	123		0.10	0.04	200.8
Arsenic	75		1.00	0.14	200.8
Chromium	52		0.40	0.06	200.8
Lead	208		0.10	0.04	200.8
Nickel	60		0.40	0.06	200.8
Selenium	82		2.0	0.4	200.8
Silver	107		0.040	0.006	200.8
Thallium	205		0.040	0.004	200.8

Comments _____

METALS
-10-
METHOD DETECTION LIMITS

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

ICP/ICP-MS ID #: TJA Iris ICP

GFAA ID #: AA ID #:

Analyte	Wave-length	Back-ground	MRL (ug/L)	MDL (ug/L)	Method
Barium	233.50		5.0	1.0	6010B
Beryllium	313.04		5.00	0.15	6010B
Cadmium	226.50		5.0	0.5	6010B
Cobalt	228.62		10.0	1.5	6010B
Copper	324.75		10.0	10.0	6010B
Molybdenum	202.03		10.0	10.0	6010B
Vanadium	310.20		10.0	3.0	6010B
Zinc	206.20		10.0	1.5	6010B

Comments _____

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

ICP ID Number : ICP IRIS

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	Cr
Aluminum	237.3	0.0000000	0.0000000	0.0009000	0.0000000	-0.0035000
Antimony	206.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0125000
Arsenic	189.0	0.0000000	0.0000000	-0.0001400	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.7	0.0000000	0.0000000	-0.0219000	0.0000000	0.0000000
Cadmium	226.5	0.0000000	0.0000000	0.0000900	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	-0.0000230	0.0000000	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0000000	0.0000000	-0.0002000
Copper	324.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0003000	0.0000000	0.0000000	0.0000000	-0.0003600
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	-0.0009500	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	-0.0000780	0.0000000	0.0000000
Phosphorous	178.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	-0.0005000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0001000
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.8	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001220
Zinc	213.8	0.0000000	0.0000000	0.0000000	0.0000000	-0.0012000

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

ICP ID Number : ICP IRIS

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mo	Ni	Ti	V	Co
Aluminum	237.3	0.0000000	0.0000000	0.0000000	0.0000000	-0.0019000
Antimony	206.8	-0.0280000	0.0000000	0.0002400	0.0000000	0.0004000
Arsenic	189.0	0.0010000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000	-0.0004700	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000	0.0012000	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.5	0.0000250	-0.0000120	0.0000600	0.0000000	-0.0000560
Calcium	317.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0000000	0.0000000	0.0000000	-0.0001700	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0015000	0.0000000	0.0000000
Copper	324.7	0.0003400	0.0000000	-0.0000070	-0.0017000	0.0000000
Iron	259.9	-0.0003000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.0740000	0.0700000
Lead	220.3	-0.0016000	0.0004600	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.3000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0001200
Phosphorous	178.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	-0.0006800	0.0000000	0.0000000	0.0000000
Silicon	251.6	0.0118000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.0	-0.0003000	0.0000000	0.0000000	-0.0001700	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0005500	-0.0060000	-0.0002500	0.0000000
Thallium	190.8	0.0000000	0.0000000	-0.0016000	0.0017000	0.0037000
Tin	189.9	0.0000000	0.0000000	-0.0019000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0002500	0.0000000	-0.0006400	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.8	0.0000000	0.0056600	-0.0000600	0.0000000	0.0000000

Columbia Analytical Services,Inc.

METALS
-11A-
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

ICP ID Number : ICP IRIS

Analyte	Wave-length (nm)	Mn	P	C
Aluminum	237.3	0.0000000	0.0000000	0.0000000
Antimony	206.8	0.0000000	0.0000000	0.0000000
Arsenic	189.0	0.0000000	0.0000000	0.0000000
Barium	233.5	0.0000000	0.0000000	0.0000000
Beryllium	313.0	0.0000000	0.0000000	0.0000000
Boron	249.7	0.0000000	0.0000000	0.0000000
Cadmium	226.5	0.0000000	0.0000000	0.0000000
Calcium	317.9	0.0000000	0.0000000	0.0000000
Calcium	318.1	0.0000000	0.0000000	0.0000000
Chromium	267.7	0.0003100	0.0000370	0.0000000
Cobalt	228.6	0.0000000	0.0000000	0.0000000
Copper	324.7	0.0000000	0.0000000	0.0000000
Iron	259.9	-0.0004000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000
Molybdenum	202.0	0.0000000	0.0000000	0.0000000
Nickel	231.6	0.0000000	0.0000000	0.0000000
Phosphorous	178.2	0.0000000	0.0000000	0.0000000
Potassium	766.4	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000
Silicon	251.6	-0.0040000	0.0000000	0.0000000
Silver	328.0	0.0000000	0.0000000	0.0000000
Sodium	589.5	0.0000000	0.0000000	0.0000000
Sulfur	182.0	0.0000000	0.0000000	0.0000000
Strontium	346.4	0.0000000	0.0000000	0.0000000
Thallium	190.8	-0.0005900	0.0000000	0.0000000
Tin	189.9	0.0000000	0.0000000	0.0000000
Titanium	323.4	0.0000000	0.0000000	0.0000000
Vanadium	310.2	0.0000000	0.0000000	0.0000000
Zinc	213.8	0.0000000	0.0000000	0.0000000

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

ICP ID Number: Excell ICPMS

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.00	500.0	200.8
Arsenic	15.00	500.0	200.8
Chromium	15.00	500.0	200.8
Lead	15.00	500.0	200.8
Nickel	15.00	500.0	200.8
Selenium	15.00	500.0	200.8
Silver	15.00	300.0	200.8
Thallium	15.00	500.0	200.8

Comments:

METALS

-12-

ICP LINEAR RANGES (QUARTERLY)

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

ICP ID Number: TJA Iris ICP

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Beryllium	5.00	1800.0	6010B
Cadmium	5.00	18000.0	6010B
Cobalt	5.00	90000.0	6010B
Copper	5.00	90000.0	6010B
Molybdenum	5.00	90000.0	6010B
Zinc	15.00	180000.0	6010B

Comments:

METALS
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PREPARATION LOG

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Novato Ballfields

Method: P

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSS	4/14/05	EPA 3050B	1.00	100
K2502554-MB	4/14/05	EPA 3050B	1.00	100
K2502554-001	4/14/05	EPA 3050B	1.40	100
K2502554-001D	4/14/05	EPA 3050B	1.42	100
K2502554-001S	4/14/05	EPA 3050B	1.41	100

METALS
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PREPARATION LOG

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Novato Ballfields

Method: CV

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSS	4/11/05	METHOD	0.501	100
K2502554-MB	4/11/05	METHOD	1.00	100
K2502554-001	4/11/05	METHOD	1.87	100
K2502554-001D	4/11/05	METHOD	1.85	100
K2502554-001S	4/11/05	METHOD	1.81	100

METALS
- 13 -
PREPARATION LOG

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Novato Ballfields

Method: MS

Lab Code	Preparation Date	Preparation Method	Initial (mL or grams)	Final Volume (mL)
LCSS	4/12/05	EPA 3050B	1.00	100
K2502554-MB	4/12/05	EPA 3050B	1.00	100
K2502554-001	4/12/05	EPA 3050B	1.40	100
K2502554-001D	4/12/05	EPA 3050B	1.42	100
K2502554-001S	4/12/05	EPA 3050B	1.40	100
LCSS	4/14/05	EPA 3050B	1.00	100
K2502554-MB	4/14/05	EPA 3050B	1.00	100
K2502554-001	4/14/05	EPA 3050B	1.40	100
K2502554-001D	4/14/05	EPA 3050B	1.42	100
K2502554-001S	4/14/05	EPA 3050B	1.41	100

METALS
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ANALYSIS RUN LOG

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

Instrument ID Number: CETAC-1 Method: CV

Start Date: 4/12/05 End Date: 4/12/05

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION ZERO	1.00	13:57																X										
STANDARD #1	1.00	13:58																X										
STANDARD #2	1.00	14:00																X										
STANDARD #3	1.00	14:01																X										
STANDARD #4	1.00	14:03																X										
STANDARD #5	1.00	14:05																X										
ICV	1.00	14:06																X										
ICB	1.00	14:08																X										
CCV1	1.00	14:09																X										
CCB1	1.00	14:11																X										
CRA	1.00	14:13																X										
K2502554-MB	1.00	14:14																X										
LCSS	1.00	14:16																X										
ZZZZZZ	1.00	14:17																										
ZZZZZZ	1.00	14:19																										
ZZZZZZ	1.00	14:21																										
ZZZZZZ	1.00	14:22																										
ZZZZZZ	1.00	14:24																										
ZZZZZZ	1.00	14:25																										
ZZZZZZ	1.00	14:27																										
CCV2	1.00	14:29																X										
CCB2	1.00	14:30																X										
ZZZZZZ	1.00	14:32																										
ZZZZZZ	1.00	14:33																										
ZZZZZZ	1.00	14:35																										
ZZZZZZ	1.00	14:37																										
ZZZZZZ	1.00	14:38																										
ZZZZZZ	1.00	14:40																										
ZZZZZZ	1.00	14:41																										
ZZZZZZ	1.00	14:43																										

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
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ANALYSIS RUN LOG

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

Instrument ID Number: CETAC-1 Method: CV

Start Date: 4/12/05 End Date: 4/12/05

Sample ID.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	14:45																									
ZZZZZZ	1.00	14:46																									
CCV3	1.00	14:48																X									
CCB3	1.00	14:49																X									
ZZZZZZ	1.00	14:51																									
ZZZZZZ	1.00	14:53																									
ZZZZZZ	1.00	14:54																									
K2502554-001	1.00	14:56																X									
K2502554-001D	1.00	14:57																X									
K2502554-001S	1.00	14:59																X									
CCV4	1.00	15:01																X									
CCB4	1.00	15:02																X									

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

Instrument ID Number: TJA Iris ICP Method: P

Start Date: 4/19/05 End Date: 4/19/05

Sample ID.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
CAL-BLANK	1.00	09:42					X	X	X			X	X												X	X		*
CAL-STDA	1.00	09:45							X			X	X												X	X		*
CAL-STDB	1.00	09:48					X	X																					
ICV	1.00	09:51					X	X	X			X	X												X	X		*
ZZZZZZ	1.00	09:54																											
ZZZZZZ	1.00	09:58																											
ICB	1.00	10:00					X	X	X			X	X												X	X		*
CCV1	1.00	10:03							X			X	X												X	X		*
CCV1	1.00	10:19					X	X																					
CCB1	1.00	10:23					X	X	X			X	X												X	X		*
CRI	1.00	10:40					X	X	X			X	X												X	X		*
ICSA	1.00	10:44					X	X	X			X	X												X	X		*
ICSAB	1.00	10:47					X	X	X			X	X												X	X		*
K2502554-MB	2.00	10:51					X	X	X			X	X												X	X		*
LCSS	2.00	10:53					X	X	X			X	X												X	X		*
K2502554-001	2.00	10:56					X	X	X			X	X												X	X		*
K2502554-001D	2.00	10:59					X	X	X			X	X												X	X		*
K2502554-001S	2.00	11:02					X	X	X			X	X												X	X		*
K2502554-001L	10.00	11:04					X	X	X			X	X												X	X		*
CCV2	1.00	11:09							X			X	X												X	X		*
CCV2	1.00	11:11					X	X																					
CCB2	1.00	11:14					X	X	X			X	X												X	X		*

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

Instrument ID Number: TJA Iris ICP Method: P

Start Date: 4/19/05 End Date: 4/19/05

Sample ID.	D/F	Time	% R	Analytes																										
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U	Th												
CAL-BLANK	1.00	09:42					X																							
CAL-STDA	1.00	09:45					X																							
CAL-STDB	1.00	09:48																												
ICV	1.00	09:51					X																							
ZZZZZZ	1.00	09:54																												
ZZZZZZ	1.00	09:58																												
ICB	1.00	10:00					X																							
CCV1	1.00	10:03					X																							
CCV1	1.00	10:19																												
CCB1	1.00	10:23					X																							
CRI	1.00	10:40					X																							
ICSA	1.00	10:44					X																							
ICSAB	1.00	10:47					X																							
K2502554-MB	2.00	10:51					X																							
LCSS	2.00	10:53					X																							
K2502554-001	2.00	10:56					X																							
K2502554-001D	2.00	10:59					X																							
K2502554-001S	2.00	11:02					X																							
K2502554-001L	10.00	11:04					X																							
CCV2	1.00	11:09					X																							
CCV2	1.00	11:11																												
CCB2	1.00	11:14					X																							

METALS
- 14 -
ANALYSIS RUN LOG

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

Instrument ID Number: Excell ICPMS Method: MS

Start Date: 4/14/05 End Date: 4/14/05

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION BLANK	1.00	08:35				X					X				X				X		X			X			
25 PPB STD. MS6-95-D	1.00	08:38				X					X				X				X		X			X			
ICV	1.00	08:41				X					X				X				X		X			X			
CCV1	1.00	08:44				X					X				X				X		X			X			
ICB	1.00	08:48				X					X				X				X		X			X			
CCB1	1.00	08:50				X					X				X				X		X			X			
CRA	1.00	08:53				X					X				X				X		X			X			
ICSA	1.00	08:56				X					X				X				X		X			X			
ICSAB	1.00	08:59				X					X				X				X		X			X			
K2502554-MB	5.00	09:02				X					X				X				X		X			X			
LCSS	20.00	09:05				X					X				X				X		X			X			
ZK2502554-001	5.00	09:07																										
K2502554-001	10.00	09:14				X					X				X				X		X			X			
K2502554-001D	10.00	09:16				X					X				X				X		X			X			
K2502554-001S	25.00	09:19				X					X				X				X		X			X			
ZZZZZZ	1.00	09:29																										
CCV2	1.00	09:32				X					X				X				X		X			X			
CCB2	1.00	09:36				X					X				X				X		X			X			

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Battelle Memorial Institute Service Request: K2502554

Project No.: G486063

Project Name: Novato Ballfields

Instrument ID Number: Excell ICPMS Method: MS

Start Date: 4/15/05 End Date: 4/15/05

Sample ID.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CALIBRATION BLANK	1.00	08:28			X																X					
25 PPB STD. MS6-96-C	1.00	08:30			X																X					
ICV	1.00	08:31			X																X					
CCV1	1.00	08:33			X																X					
ICB	1.00	08:34			X																X					
CCB1	1.00	08:35			X																X					
CRA	1.00	08:36			X																X					
ICSA	1.00	08:38			X																X					
ICSAB	1.00	08:39			X																X					
K2502554-MB	5.00	08:41			X																X					
K2502554-001	5.00	08:45			X																X					
K2502554-001D	5.00	08:46			X																X					
K2502554-001S	5.00	08:47			X																X					
LCSS	20.00	08:55			X																X					
CCV2	1.00	08:56			X																X					
CCB2	1.00	08:58			X																X					

* - Denotes additional elements (other than the standard elements) are represented on another Form 14

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0500436

Service Request Number(s): K0502554 Redigest for Sb + Ag only Print 4/19/05

Star Lims Run No.:

Method: CLP 3010A 3020A
3005A (3050B) CLP Hot Block Other-

Analysis for: (ICP) (ICP-MS) GFAA
Flame AA Other

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
K0502554-BLK			X		100	4/14/05
-LCS	1.00					
-1	1.40					
-1D	1.42					
-1S	1.41					
				15S 4/14/05		

Time Digestion Started:

Lot # Acids Used: HNO3 A27061 HCl 44224 H2O2 4500550K

LCSS (circle appropriate) (ERA CLP Soil Lot # 246) EPA Lot # 0287 Other:

GFAA LCSW = GFLCSW, MET1-40-I, _____ mls. added
ICP LCSW = QCP CICV-1, MET1-33-M, _____ mls. added
QCP CICV-2, MET1-33-N, _____ mls. added
QCP CICV-3, MET1-33-O, _____ mls. added
SS6, MET1-40-F, _____ mls. added

TCLP Spike/LCSE
SS1 _____ mls. added
SS2 _____ mls. added

SPIKE INFO
SS1-MET1-40-E, 2.0 mls added
SS5-MET1-39-F, 1.0 mls added
SS6-MET1-40-F, 1.0 mls added
SS4-MET1-40-J, _____ mls added
200.8 1000ppb Stock (MS6-86-A) _____ mls added
200.8 Ag 1000ppb Stock (MS6-85-C) _____ mls added

Additional spikes:

Comments:

Analyst Brian Shelton Date 4/14/05
Reviewer _____ Date 4/15/05

metdig.xls
11/11/2004

METALS SPIKE FORM

Service Request # K2502554

Q.C. Sample # 1

Circle type of digest: GFAA (ICP) FAA (ICP-MS) Other:_____ Initials / Date: BS / 4/14/05

Circle type of sample: (Soil) Water Misc. Sludge Oil Other:_____

Solution Name	Element	mls of custom mix CAS-CAL-14 (MET1-34-W)	Final Volume	Source	Lot#	Exp. Date	Solution Conc. mg/L	Enter mls Added	
	HNO3	50.0	1000ml	JT BAKER	A26032	-	-		
	Al	100	1000ml	MET1-34-W	-	9/1/2005	200		
	Ag	100	1000ml	MET1-34-W	-	9/1/2005	5		
	Ba	100	1000ml	MET1-34-W	-	9/1/2005	200		
	Be	100	1000ml	MET1-34-W	-	9/1/2005	5		
	Cd	100	1000ml	MET1-34-W	-	9/1/2005	5		
	Co	100	1000ml	MET1-34-W	-	9/1/2005	50		**Expires: 9/1/05**
	Cr	100	1000ml	MET1-34-W	-	9/1/2005	20		
SS1-MET1-40-E	Cu	100	1000ml	MET1-34-W	-	9/1/2005	25	2.0	
	Fe	100	1000ml	MET1-34-W	-	9/1/2005	100		
	Pb	100	1000ml	MET1-34-W	-	9/1/2005	50		
	Mn	100	1000ml	MET1-34-W	-	9/1/2005	50		
	Ni	100	1000ml	MET1-34-W	-	9/1/2005	50		
	Sb	50*	1000ml	MET1-33-P	-	9/1/2005	50		
	V	100	1000ml	MET1-34-W	-	9/1/2005	50		
	Zn	100	1000ml	MET1-34-W	-	9/1/2005	50		
	HNO3	25.0	500ml	JT BAKER	A27061	-	-		
	As	2.0	500ml	MET1-32-I	-	7/1/2005	4		
SS4-MET1-40-J	Cd	2.0	500ml	MET1-32-L	-	7/1/2005	4		
	Pb	2.0	500ml	MET1-34-Y	-	9/1/2005	4		**Expires: 7/1/05**
	Se	2.0	500ml	MET1-29-E	-	7/1/2005	4		
	Tl	2.0	500ml	MET1-29-F	-	7/31/2005	4		
	Cu	2.0	500ml	MET1-37-Q	-	8/31/2006	4		
	HNO3	25.0	500ml	JT BAKER	A26032	-	-		
SS5-MET1-39-F	As	50.0	500ml	MET1-32-I	-	7/1/2005	100	1.0	**Expires:7/31/05**
	Se	50.0	500ml	MET1-29-E	-	7/31/2005	100		
	Tl	50.0	500ml	MET1-29-F	-	7/31/2005	100		
	HNO3	25	500ml	JT BAKER	A26032	-	-		
SS6-MET1-40-F	B	50	500ml	MET1-29-C	-	7/30/2005	100	1.0	**Expires: 7/30/05**
	Mo	50	500ml	MET1-31-L	-	10/31/2005	100		
GFLCSW	HNO3	2.0	200ml	JT BAKER	A27061	-	-		
(MET1-40-I)	As, Pb, Se, Tl	1.0	200ml	QCP-CICV-3	X-CICP16014	4/1/2005	2.5		
	Cd	-	-	QCP-CICV-3	-	-	1.25		**Expires: 4/1/06**
	Cu	0.5	200ml	MET1-37-Q	-	8/31/2006	2.5		
QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	IV	W-MEB156015	9/1/2005	2500		
(MET1-33-M)	Al, Ba	no dilution	-	IV	W-MEB156015	9/1/2005	1000		
	Fe	no dilution	-	IV	W-MEB156015	9/1/2005	500		**Expires: 09/01/05**
	Co, Mn, Ni, V, Zn	no dilution	-	IV	W-MEB156015	9/1/2005	250		
	Cu, Ag	no dilution	-	IV	W-MEB156015	9/1/2005	125		
	Cr	no dilution	-	IV	W-MEB156015	9/1/2005	100		
	Be	no dilution	-	IV	W-MEB156015	9/1/2005	25		
QCP-CICV-2 (MET1-33-N)	Sb	no dilution	-	IV	W-CICP13118	9/1/2005	500		**Expires: 9/01/05**
QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	IV	W-MEB156036	9/1/2005	500		**Expires: 09/01/05**
(MET1-33-O)	Cd	no dilution	-	IV	W-MEB156036	9/1/2005	250		

* Denotes volume of 1000 ppm stock standard.

Element	mls of	ppm	Source	Lot# / Lab Code	Exp. Date

Columbia Analytical Services
Metals Digestion Sheet

Extr/Prep Batch
KP0500435

Service Request Number(s): K2502554

Star Lims Run No.:

Method: CLP 3010A 3020A 3005A (3050B) CLP Hot Block Other-____

Analysis for: ICP (ICP-MS) GFAA Flame AA Other____

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
PB ~~RW~~ S			X		100	10% HNO_3
LCSS	1.00		↓		↓	↓
K2554-1	1.40		↓		↓	↓
↓ -10	1.42		↓		↓	↓
↓ -15	1.40		↓		↓	↓
						RW 4-12-05

Time Digestion Started:____

Lot # Acids Used: HNO3 427061 HCl ____ H2O2 450055 08

LCSS (circle appropriate) ERA CLP Soil Lot # 246 EPA Lot # 0287 Other:____

GFAA LCSW = GFLCSW, MET1-40-I, ____ mls. added

ICP LCSW = QCP CICV-1, MET1-33-M, ____ mls. added
QCP CICV-2, MET1-33-N, ____ mls. added
QCP CICV-3, MET1-33-O, ____ mls. added
SS6, MET1-40-F, ____ mls. added

TCLP Spike/LCSE
SS1 ____ mls. added
SS2 ____ mls. added

SPIKE INFO
SS1-MET1-40-E, 2.0 mls added
SS4-MET1-40-J, ____ mls added
SS5-MET1-39-F, 1.0 mls added
200.8 1000ppb Stock (MS6-86-A) ____ mls added
SS6-MET1-40-F, 1.0 mls added
200.8 Ag 1000ppb Stock (MS6-85-C) ____ mls added

Additional spikes:____

Comments:____

Analyst Robert Martinez / Brian Sadler Date 4-12-05 4/12/05

Reviewer ____ Date 4/13/05

metdig.xls
11/11/2004

METALS SPIKE FORM

Service Request # K2502554
Q.C. Sample # K2554-1

Circle type of digest: GFAA ICP FAA (ICP-MS) Other:_____ Initials / Date: RN / 4-12-05
Circle type of sample: (Soil) Water Misc. Sludge Oil Other:_____

Solution Name	Element	mls of custom mix CAS-CAL-14 (MET1-34-W)	Final Volume	Source	Lot#	Exp. Date	Solution Conc. mg/L	Enter mls Added	
	HNO3	50.0	1000ml	JT BAKER	A26032	-	-		
	Al	100	1000ml	MET1-34-W	-	9/1/2005	200		
	Ag	100	1000ml	MET1-34-W	-	9/1/2005	5		
	Ba	100	1000ml	MET1-34-W	-	9/1/2005	200		
	Be	100	1000ml	MET1-34-W	-	9/1/2005	5		
	Cd	100	1000ml	MET1-34-W	-	9/1/2005	5		
	Co	100	1000ml	MET1-34-W	-	9/1/2005	50		
	Cr	100	1000ml	MET1-34-W	-	9/1/2005	20		
SS1-MET1-40-E	Cu	100	1000ml	MET1-34-W	-	9/1/2005	25		**Expires: 9/1/05**
	Fe	100	1000ml	MET1-34-W	-	9/1/2005	100		
	Pb	100	1000ml	MET1-34-W	-	9/1/2005	50		
	Mn	100	1000ml	MET1-34-W	-	9/1/2005	50		
	Ni	100	1000ml	MET1-34-W	-	9/1/2005	50		
	Sb	50*	1000ml	MET1-33-P	-	9/1/2005	50		
	V	100	1000ml	MET1-34-W	-	9/1/2005	50		
	Zn	100	1000ml	MET1-34-W	-	9/1/2005	50	2.0	
	HNO3	25.0	500ml	JT BAKER	A27061	-	-		
	As	2.0	500ml	MET1-32-I	-	7/1/2005	4		
SS4-MET1-40-J	Cd	2.0	500ml	MET1-32-L	-	7/1/2005	4		
	Pb	2.0	500ml	MET1-34-Y	-	9/1/2005	4		**Expires: 7/1/05**
	Se	2.0	500ml	MET1-29-E	-	7/1/2005	4		
	Tl	2.0	500ml	MET1-29-F	-	7/31/2005	4		
	Cu	2.0	500ml	MET1-37-Q	-	8/31/2006	4		
	HNO3	25.0	500ml	JT BAKER	A26032	-	-		
SS5-MET1-39-F	As	50.0	500ml	MET1-32-I	-	7/1/2005	100		**Expires:7/31/05**
	Se	50.0	500ml	MET1-29-E	-	7/31/2005	100	1.0	
	Tl	50.0	500ml	MET1-29-F	-	7/31/2005	100		
	HNO3	25	500ml	JT BAKER	A26032	-	-		
SS6-MET1-40-F	B	50	500ml	MET1-29-C	-	7/30/2005	100		**Expires: 7/30/05**
	Mo	50	500ml	MET1-31-L	-	10/31/2005	100	1.0	
GFLCSW	HNO3	2.0	200ml	JT BAKER	A27061	-	-		
(MET1-40-I)	As, Pb, Se, Tl	1.0	200ml	QCP-CICV-3	X-CICP16014	4/1/2005	2.5		
	Cd	-	-	QCP-CICV-3	-	-	1.25		**Expires: 4/1/06**
	Cu	0.5	200ml	MET1-37-Q	-	8/31/2006	2.5		
QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	IV	W-MEB156015	9/1/2005	2500		
(MET1-33-M)	Al, Ba	no dilution	-	IV	W-MEB156015	9/1/2005	1000		
	Fe	no dilution	-	IV	W-MEB156015	9/1/2005	500		**Expires: 09/01/05**
	Co, Mn, Ni, V, Zn	no dilution	-	IV	W-MEB156015	9/1/2005	250		
	Cu, Ag	no dilution	-	IV	W-MEB156015	9/1/2005	125		
	Cr	no dilution	-	IV	W-MEB156015	9/1/2005	100		
	Be	no dilution	-	IV	W-MEB156015	9/1/2005	25		
QCP-CICV-2	Sb	no dilution	-	IV	W-CICP13118	9/1/2005	500		**Expires: 9/01/05**
(MET1-33-N)									
QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	IV	W-MEB156036	9/1/2005	500		**Expires: 09/01/05**
(MET1-33-O)	Cd	no dilution	-	IV	W-MEB156036	9/1/2005	250		

* Denotes volume of 1000 ppm stock standard.

Element	mls of	ppm	Source	Lot# / Lab Code	Exp. Date

Atomic Absorption Data Review Form

Element Hg AA # ___

Analysis Lot # ___ Analytical Batch KA0500251

Cal Std/CCV Source HG1-37-P

Service Request Numbers:

2505 2554

	Yes	No	NA
1) Appropriate Standardization Completed	✓	___	___
2) ICV within 10% of true value.	✓	___	___
3) CCVs in Control	✓	___	___
4) CCB's and/or ICB's below MRL	✓	___	___
5) All reported results within calibration range	✓	___	___
6) Calculations Correct	✓	___	___

Comments :

Reviewed By: [signature] Date: 4/13/05

C: Varian 7 forms

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH: _____
ANALYTICAL WORKSHEET

Method: ~~(Circle~~ One) 7470A/ 7471A/ 245.1	Service Request # :
Analysis ~~For~~: Hg	2505 2554

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)	
1	ICV	—	—	—	5.48		110Y.	
2	ICB	—	—	—	-0.01		<0.2	
3	CCV1	—	—	—	5.18		104Y.	
4	CCB1	—	—	—	-0.01		<0.2	
5	CRA	—	—	—	0.12		0.12	60Y.
6	MB(KP0500341)	100	100	—	0.07	<0.01		
7	LCS 10ul	0.501		—	7.71	1.54		103Y.
8	K2505-01	1.255		—	0.40	0.03		x̄=0.0
9	01D	1.085		—	0.35	0.03		RPD=-
10	01S	1.057		—	6.12	0.48		96Y.
11	02	1.090		—	0.67	0.06		
12	03	1.022		—	0.47	0.05		
13	04	1.148		—	0.37	0.03		
14	05	1.235		—	0.99	0.08		
15	CCV2	—	—	—	5.27		106Y.	
16	CCB2	—	—	—	0.04		<0.2	
17	K2505-06	1.048 ~~100~~ ~~1.250~~ ①	100	—	1.00	0.10		
18	07	1.032 ~~0.56~~ ~~1.115~~ ①		—	0.56	0.05		
19	08	1.054 ~~0.~~ ~~1.647~~ ①		—	0.74	0.07		
20	09	1.033 ~~1.148~~ ①		—	0.42	0.04		
21	10	1.031 ~~1.115~~ ①		—	0.48	0.05		
22	11	1.039 ~~1.621~~ ①		—	0.63	0.06		
23	12	1.060		—	0.63	0.06		
24	13	1.025		—	0.44	0.04		
25	14	1.018		—	0.47	0.05		

Comments: Reporting Levels:
Waters - 0.2 µg/L K2505-01S @ 0.47 ug/kg
Soil - 0.02 mg/kg
TCLP - 1 ug/L

Water Spike Level : 1.0 µg/L
TCLP Spike Level : 5.0 µg/L

Analyst	Date:	Page Number:
C. Mihai-Layar	4/12/05	1 of 2

① @ 4/12/05

[HGFORM] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH: _____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A (7471A) 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)	
26	K2505-15	1.274	100	—	0.92	0.07		
27	CCV3	—	—	—	5.17		104%	
28	CCB3	—	—	—	0.19		<0.2	
29	K2505-16	1.170	100	—	0.42	0.04		
30	17	1.055		—	0.30	0.03		
31	18	1.062		—	0.17	0.02		
32	K2554-01	1.291		—	0.74	0.06		X=a0
33	01D	1.280		—	0.91	0.07		RPD=4
34	01S	1.251		—	6.25	0.50		110%
35	CCV4	—	—	—	5.12		102%	
36	CCB4	—	—	—	0.09		<0.2	
37								
38								
39								
40								
41								
42								
43				4/12/05				
44								
45								
46								
47								
48								
49								
50								

Comments: Reporting Levels:
Waters - 0.2 µg/L K2554-01S @ 0.40 mg/kg
Soil - 0.02 mg/kg
TCLP - 1 µg/L

Water Spike Level : 1.0 µg/L
Soil Spike Level : 5.0 µg/L = mg/kg
TCLP Spike Level : 5.0 µg/L

Analyst:	Date:	Page Number:
C. Mihai-Lazar	4/12/05	2 of 2

[HGFORM] HG2.XLS

CETAC Hg Analysis Report - 05041200.DB - Tuesday, April 12, 2005, 3:03:57 PM

Analyst CARMEN
Date Started Tuesday, April 12, 2005, 12:33:12
Worksheet HG 4/12/05 RUN1
Comment KA0500251
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	12-Apr-2005, 12:33	0.00	3.32	1.00	1710	1751	1798	1847	
Standard #1	12-Apr-2005, 12:34	0.20	4.49	1.00	933	990	1028	1027	
Standard #2	12-Apr-2005, 12:36	0.50	3.20	1.00	1445	1504	1546	1549	
Standard #3	12-Apr-2005, 12:37	1.00	4.44	1.00	2337	2498	2579	2565	
Standard #4	12-Apr-2005, 12:39	5.00	4.86	1.00	11450	11819	11564	10552	
Standard #5	12-Apr-2005, 12:41	10.00	3.82	1.00	23671	23266	24470	25355	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	12-Apr-2005, 12:42	4.97	1.30	1.00	12132	11979	11976	12289	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICB	12-Apr-2005, 12:44	-0.05	102.00	1.00	646	558	479	396	Q

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV1	12-Apr-2005, 12:45	4.75	1.77	1.00	11411	11714	11786	11424	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB1	12-Apr-2005, 12:47	-0.08	32.00	1.00	524	460	422	395	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CRA	12-Apr-2005, 12:49	-0.05	24.70	1.00	498	481	508	548	
MB(KP0500341)	12-Apr-2005, 12:50	-0.23	4.70	1.00	108	97	84	50	
LCS SOIL	12-Apr-2005, 12:52	8.82	3.71	1.00	21930	21255	20589	20214	
K2505-01	12-Apr-2005, 12:53	0.24	4.40	1.00	1221	1184	1176	1163	
K2505-01D	12-Apr-2005, 12:55	0.23	9.61	1.00	1231	1185	1138	1114	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	12-Apr-2005, 12:58	0.00	759.00	1.00	97	16	-23	-56	
Standard #1	12-Apr-2005, 13:00	0.20	1.15	1.00	448	455	457	461	
Standard #2	12-Apr-2005, 13:01	0.50	5.82	1.00	1138	1250	1295	1288	
Standard #3	12-Apr-2005, 13:03	1.00	5.61	1.00	2232	2219	2127	1972	
Standard #4	12-Apr-2005, 13:05	5.00	8.24	1.00	10029	11336	11803	12165	
Standard #5	12-Apr-2005, 13:06	10.00	1.23	1.00	25802	26227	26538	26426	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	12-Apr-2005, 13:08	5.06	1.87	1.00	12717	12515	12906	13084	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICB	12-Apr-2005, 13:09	0.33	10.50	1.00	674	544	487	483	Q

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	12-Apr-2005, 13:13	0.00	11.20	1.00	44	57	53	55	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	12-Apr-2005, 13:16	0.00	5.02	1.00	-200	-192	-189	-212	
Standard #1	12-Apr-2005, 13:17	0.20	4.72	1.00	690	719	758	763	
Standard #2	12-Apr-2005, 13:19	0.50	3.14	1.00	1119	1146	1174	1204	
Standard #3	12-Apr-2005, 13:20	1.00	1.77	1.00	2574	2625	2668	2676	
Standard #4	12-Apr-2005, 13:22	5.00	2.31	1.00	12158	12477	12750	12779	
Standard #5	12-Apr-2005, 13:24	10.00	1.80	1.00	25082	25711	26084	26046	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	12-Apr-2005, 13:25	5.13	0.38	1.00	13077	13149	13194	13118	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICB	12-Apr-2005, 13:27	0.20	14.30	1.00	563	474	419	402	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV1	12-Apr-2005, 13:28	4.87	2.26	1.00	12058	12438	12664	12650	

Analyst CARMEN
Date Started Tuesday, April 12, 2005, 13:30:28
Worksheet HG 4/12/05 RUN1
Comment KA0500251
* All concentrations are dilution corrected.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB1	12-Apr-2005, 13:30	0.21	17.40	1.00	605	530	449	391	Q

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	12-Apr-2005, 13:32	0.00	6.56	1.00	286	306	315	272	
Standard #1	12-Apr-2005, 13:34	0.20	5.09	1.00	640	665	697	718	
Standard #2	12-Apr-2005, 13:35	0.50	2.97	1.00	1117	1172	1199	1173	
Standard #3	12-Apr-2005, 13:37	1.00	2.16	1.00	2581	2649	2718	2677	
Standard #4	12-Apr-2005, 13:38	5.00	8.26	1.00	10810	11970	12953	12891	
Standard #5	12-Apr-2005, 13:40	10.00	2.16	1.00	24768	25888	25926	25286	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	12-Apr-2005, 13:42	5.28	0.70	1.00	13205	13354	13459	13365	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
Calibration Zero	12-Apr-2005, 13:57	0.00	10.90	1.00	85	82	94	104	
Standard #1	12-Apr-2005, 13:58	0.20	1.82	1.00	639	647	658	666	
Standard #2	12-Apr-2005, 14:00	0.50	2.41	1.00	1182	1223	1240	1248	
Standard #3	12-Apr-2005, 14:01	1.00	8.08	1.00	2077	2270	2470	2467	
Standard #4	12-Apr-2005, 14:03	5.00	1.82	1.00	11910	12178	12235	12449	
Standard #5	12-Apr-2005, 14:05	10.00	2.17	1.00	24573	25201	25578	25836	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICV	12-Apr-2005, 14:06	5.47	0.59	1.00	13645	13780	13817	13683	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
ICB	12-Apr-2005, 14:08	-0.01	103.00	1.00	-25	-63	-85	-82	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV1	12-Apr-2005, 14:09	5.18	0.70	1.00	12892	13035	13076	12910	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB1	12-Apr-2005, 14:11	-0.01	342.00	1.00	5	-36	-69	-98	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CRA	12-Apr-2005, 14:13	0.12	2.16	1.00	270	281	281	268	
MB(KP0500341)	12-Apr-2005, 14:14	0.07	4.60	1.00	161	152	145	141	
LCS SOIL	12-Apr-2005, 14:16	7.71	2.67	1.00	18595	19572	19708	19586	
K2505-01	12-Apr-2005, 14:17	0.40	7.84	1.00	858	1017	1028	1003	
K2505-01D	12-Apr-2005, 14:19	0.35	1.36	1.00	844	866	855	839	
K2505-01S	12-Apr-2005, 14:21	5.12	15.70	1.00	10329	12087	14281	14666	
K2505-02	12-Apr-2005, 14:22	0.67	1.27	1.00	1676	1662	1654	1625	
K2505-03	12-Apr-2005, 14:24	0.47	1.05	1.00	1166	1139	1162	1162	
K2505-04	12-Apr-2005, 14:25	0.37	3.49	1.00	848	901	925	903	
K2505-05	12-Apr-2005, 14:27	0.99	12.50	1.00	2043	2374	2680	2702	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV2	12-Apr-2005, 14:29	5.27	1.04	1.00	13015	13233	13335	13267	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB2	12-Apr-2005, 14:30	0.04	14.00	1.00	77	75	72	46	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K2505-06	12-Apr-2005, 14:32	1.00	1.50	1.00	2420	2462	2507	2487	
K2505-07	12-Apr-2005, 14:33	0.56	2.62	1.00	1404	1396	1365	1323	
K2505-08	12-Apr-2005, 14:35	0.74	1.29	1.00	1850	1850	1831	1799	
K2505-09	12-Apr-2005, 14:37	0.42	3.02	1.00	1005	996	1034	1067	
K2505-10	12-Apr-2005, 14:38	0.48	0.91	1.00	1170	1188	1181	1163	
K2505-11	12-Apr-2005, 14:40	0.63	1.26	1.00	1568	1568	1549	1526	
K2505-12	12-Apr-2005, 14:41	0.63	0.53	1.00	1545	1539	1552	1532	
K2505-13	12-Apr-2005, 14:43	0.94	2.81	1.00	2245	2319	2367	2397	
K2505-14	12-Apr-2005, 14:45	0.47	2.45	1.00	1119	1142	1171	1184	
K2505-15	12-Apr-2005, 14:46	0.92	4.46	1.00	2198	2176	2314	2396	

Analyst CARMEN
Date Started Tuesday, April 12, 2005, 14:48:21
Worksheet HG 4/12/05 RUN1
Comment KA0500251
* All concentrations are dilution corrected.

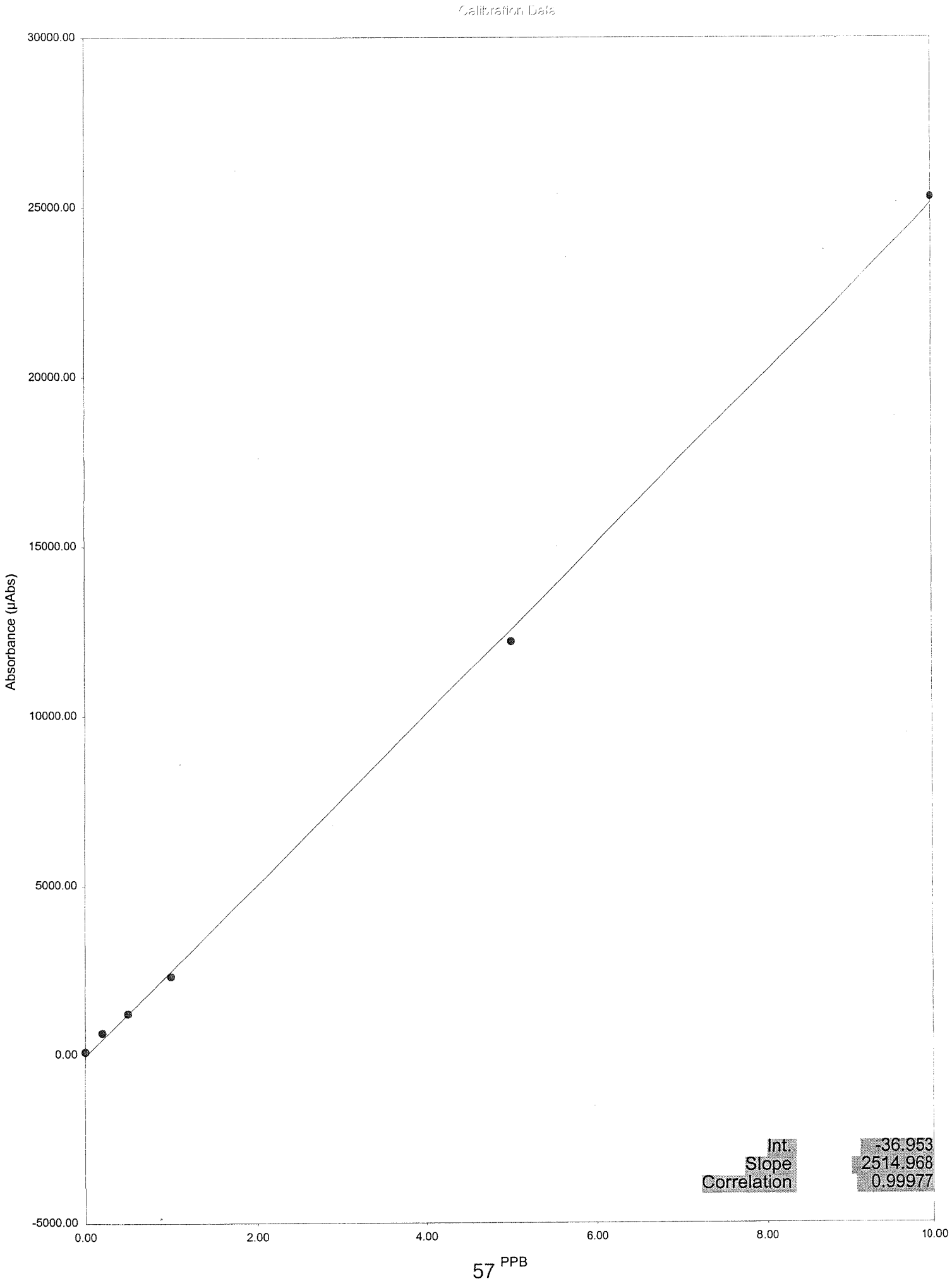
Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV3	12-Apr-2005, 14:48	5.17	3.78	1.00	12241	13097	13292	13242	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB3	12-Apr-2005, 14:49	0.19	6.89	1.00	396	420	460	464	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
K2506-16	12-Apr-2005, 14:51	0.42	9.98	1.00	870	1018	1068	1112	
K2505-17	12-Apr-2005, 14:53	0.30	6.14	1.00	686	757	782	694	
K2506-18	12-Apr-2005, 14:54	0.17	2.96	1.00	386	397	402	373	
K2554-01	12-Apr-2005, 14:56	0.74	9.98	1.00	1553	1862	1955	1930	
K2554-01D	12-Apr-2005, 14:57	0.91	3.72	1.00	2139	2225	2298	2331	
K2554-01S	12-Apr-2005, 14:59	6.25	0.66	1.00	15530	15716	15758	15729	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCV4	12-Apr-2005, 15:01	5.12	0.71	1.00	12874	12884	12860	12690	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Dilution	Readings				Flags
CCB4	12-Apr-2005, 15:02	0.09	17.70	1.00	228	202	157	144	


Calibration Data
30000.00
25000.00
20000.00
15000.00
10000.00
5000.00
0.00
-5000.00
Absorbance (µAbs)
0.00
2.00
4.00
6.00
8.00
10.00
57 PPB
Int. -36.953
Slope 2514.968
Correlation 0.99977

Columbia Analytical Services

EPA METHOD 7471A

Service Request Number(s):

Extr/Prep Batch
KP0500341

Sample	Wet Weight (g)	% Solids	Dry Weight (g)	Final Volume (mL)
MB	100 mL	—	—	100
LCSSOIL	0.501	100	0.501	↓
2505-1	1.418	88.5	1.255	
1d	1.226	↓	1.085	
1S (*)	1.194	↓	1.057	
2	1.848	59.0	1.090	
3	1.428	71.6	1.022	
4	1.310	87.6	1.148	
5	1.402	88.1	1.235	
6	1.250	83.8	1.048	
7	1.115	92.6	1.032	
8	1.647	64.0	1.054	
9	1.148	90.0	1.033	
10	1.15	92.5	1.031	
11	1.621	64.1	1.039	
12	1.573	67.4	1.060	
13	1.505	68.1	1.025	
14	1.282	79.4	1.018	
15	1.844	69.1	1.274	
16	1.376	85.0	1.170	
17	1.188	88.8	1.055	
↓ 18	1.232	86.2	1.062	
2554-1	1.869	69.1	1.291	
1d	1.853	↓	1.280	
↓ 1S (*)	1.811	↓	1.251	↓
Std. 0.2	0.2 * mL			100
Std. 0.5	0.5 * mL			100
Std. 1.0	1.0 * mL			100
Std. 5.0	5.0 * mL			100
Std. 10.0	10.0 * mL			100
ICV	0.5 ** mL			100

Lot # of Reagents Used:

HNO3:A26032
H2SO4: 44135
HCL: 44224
K2S2O8 V05H21
KMnO4:A08623
SnCl2:A36611
NaCl :Y39615
NH2OH-HCL:A17582

LCSS = **ERA CLP Soil Lot # 246**
LCSW= **ICV Intermediate stock solution.**
Other: water bath = 95°C

*** Source Standard:** HG1-37-D 100 ppb
**** Source Standard: ICV** HG1-37-F 1000 ppb

TIME STARTED:

Comments: (*) 0.5 mL of 1000 ppb STD (HG1-37-L)

Analyst: C. Mihai-Layor
Date: 4/6/05

[HGFORM] 7471

Service Request # 2554 redigest

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments

Primary Review by _____ Date 4/19/5

Secondary Review by _____ Date 4/19/05

Method: 2005A Sample Name: Blank Operator:
Comment:
Run Time: 04/19/05 09:42 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}	313.042 {107}
Avg	.1979	-.0069	.0228	-.1522	-.0553
Stddev	.0528	.0059	.0166	.0352	.1017
%RSD	26.70	84.85	72.86	23.14	183.9
#1	.1605	-.0111	.0346	-.1273	.0166
#2	.2353	-.0028	.0111	-.1771	-.1272

Elem	B_2497	Cd2265	Ca3179	Ca3181	Cr2677
Line	249.773 {134}	226.502 {148}	317.933 {105}	318.128 {105}	267.716 {125}
Avg	.9314	.0408	-.1051	-.0664	-.0754
Stddev	.0333	.0362	.0469	.0156	.0029
%RSD	3.576	88.69	44.65	23.56	3.889
#1	.9550	.0664	-.0719	-.0553	-.0734
#2	.9079	.0152	-.1383	-.0775	-.0775

Elem	Co2286	Cu3247	Fe2599	Fe2714	Pb2203
Line	228.616 {147}	324.754 {103}	259.940 {129}	271.441 {124}	220.353 {152}
Avg	-.0152	-.0180	.4429	.2083	.1066
Stddev	.0528	.0372	.1488	.0245	.0137
%RSD	347.1	206.7	33.59	11.75	12.86
#1	.0221	.0083	.5481	.2256	.1163
#2	-.0526	-.0443	.3377	.1910	.0969

Elem	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316
Line	202.582 {166}	285.213 {117}	257.610 {131}	202.030 {166}	231.604 {145}
Avg	.1024	.0456	.2643	.0720	.0028
Stddev	.0117	.0098	.0215	.0352	.0665
%RSD	11.47	21.41	8.148	48.96	2403.
#1	.1107	.0387	.2796	.0969	.0498
#2	.0941	.0526	.2491	.0471	-.0443

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899
Line	766.490 { 44}	196.090 {171}	328.068 {102}	589.592 { 57}	189.989 {176}
Avg	-.7402	.0138	.0360	1.181	.0671
Stddev	.1038	.0117	.0509	.141	.0029
%RSD	14.02	84.86	141.4	11.94	4.371
#1	-.8136	.0221	.0719	1.281	.0650
#2	-.6668	.0055	.0000	1.082	.0692

Elem	V_3102	Zn2062	P_1782	Si2516	Ti3234
Line	310.230 {108}	206.200 {163}	178.287 {188}	251.612 {134}	323.452 {104}
Avg	.5090	.1619	.1453	1.039	.3597
Stddev	.0001	.0059	.0176	.072	.0235
%RSD	.0145	3.629	12.12	6.971	6.542
#1	.5091	.1661	.1329	1.091	.3763
#2	.5090	.1578	.1578	.9881	.3430

Elem	Tl1908	Li6707	Sr3464
Line	190.864 {176}	670.784 { 50}	346.446 { 97}
Avg	-.0388	.5063	-.0899
Stddev	.0117	.0117	.0215
%RSD	30.30	2.308	23.92
#1	-.0304	.4980	-.0747
#2	-.0471	.5145	-.1051

4/19/5

Method: 2005A Sample Name: STDA Operator:
Comment: icp2-84-c
Run Time: 04/19/05 09:45 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265	Ca3179
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}	317.933 {105}
Avg	4.624	3.821	61.98	100.2	5.817
Stddev	.048	.095	.53	.3	.039
%RSD	1.035	2.488	.8513	.3032	.6681
#1	4.658	3.889	62.35	100.4	5.790
#2	4.590	3.754	61.61	99.95	5.845

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203
Line	267.716 {125}	228.616 {147}	324.754 {103}	259.940 {129}	220.353 {152}
Avg	37.77	58.28	13.19	123.0	6.591
Stddev	.15	.50	.02	.8	.126
%RSD	.4062	.8632	.1820	.6860	1.908
#1	37.88	58.64	13.20	123.6	6.680
#2	37.66	57.92	13.17	122.4	6.502

Elem	Mg2852	Mn2576	Mo2020	Ni2316	Se1960
Line	285.213 {117}	257.610 {131}	202.030 {166}	231.604 {145}	196.090 {171}
Avg	27.68	485.4	25.00	53.43	3.256
Stddev	.08	2.4	.04	.41	.007
%RSD	.3067	.4951	.1715	.7640	.2162
#1	27.62	487.1	25.03	53.72	3.261
#2	27.74	483.7	24.97	53.15	3.251

Elem	Ag3280	Sn1899	V_3102	Zn2062	Si2516
Line	328.068 {102}	189.989 {176}	310.230 {108}	206.200 {163}	251.612 {134}
Avg	12.11	6.853	18.51	64.61	15.57
Stddev	.08	.081	.01	.41	.20
%RSD	.6581	1.176	.0382	.6291	1.309
#1	12.05	6.910	18.50	64.89	15.72
#2	12.16	6.796	18.51	64.32	15.43

Elem	Ti3234	Tl1908
Line	323.452 {104}	190.864 {176}
Avg	20.27	2.852
Stddev	.07	.074
%RSD	.3320	2.587
#1	20.32	2.904
#2	20.22	2.799

Method: 2005A Sample Name: STDB Operator:
Comment: icp2-85-f
Run Time: 04/19/05 09:48 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca3181	Fe2714
Line	237.312 {141}	233.527 {144}	313.042 {107}	318.128 {105}	271.441 {124}
Avg	26.64	868.0	149.0	33.54	268.8
Stddev	.13	2.6	.7	.02	.3
%RSD	.5030	.3031	.4734	.0456	.1042
#1	26.55	869.8	148.5	33.55	268.6
#2	26.74	866.1	149.5	33.53	269.0

Elem	Mg2025	K_7664	Na5895	P_1782	Li6707
Line	202.582 {166}	766.490 { 44}	589.592 { 57}	178.287 {188}	670.784 { 50}
Avg	87.54	374.6	1350.	9.098	655.5
Stddev	.34	.1	5.	.147	.3
%RSD	.3911	.0355	.3436	1.618	.0459
#1	87.79	374.7	1353.	8.994	655.3
#2	87.30	374.5	1347.	9.202	655.7

Elem	Sr3464
Line	346.446 { 97}
Avg	43.01
Stddev	.01
%RSD	.0283
#1	43.00
#2	43.02

Method: 2005A Sample Name: ICV Operator: WM
Comment: KA0500057 ICP2-81-G
Run Time: 04/19/05 09:51 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.941	2.538	2.503	5.159	.1277	.0028	1.200
Stddev	.030	.022	.012	.036	.0004	.0003	.002
%RSD	.6028	.8673	.4921	.6915	.2771	10.49	.1588
#1	4.920	2.554	2.512	5.184	.1279	.0030	1.199
#2	4.962	2.522	2.494	5.134	.1274	.0026	1.201
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None	QC Pass
Value	5.000	2.500	2.500	5.000	.1250		1.250
Range	10.00%	10.00%	10.00%	10.00%	10.00%		10.00%

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.49	.4927	1.246	.5926	2.543	2.451	12.00
Stddev	.04	.0039	.003	.0121	.001	.000	.01
%RSD	.3211	.7906	.2249	2.043	.0521	.0089	.1082
#1	12.46	.4954	1.248	.5840	2.542	2.451	11.99
#2	12.52	.4899	1.244	.6011	2.543	2.451	12.01
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	12.50	.5000	1.250	.6250	2.500	2.500	12.50
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.224	2.017	1.234	12.68	2.501	.6102	12.46
Stddev	.002	.007	.002	.06	.004	.0002	.07
%RSD	.1844	.3656	.1857	.4959	.1480	.0322	.5883
#1	1.223	2.011	1.233	12.63	2.499	.6103	12.41
#2	1.226	2.022	1.236	12.72	2.504	.6100	12.51
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	2.000	1.250	12.50	2.500	.6250	12.50
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	1.233	1.217	.0860	.0111	1.983	2.514
Stddev	.0020	.003	.000	.0109	.0021	.009	.001
%RSD	81.93	.2253	.0039	12.72	18.81	.4488	.0305
#1	-.0010	1.231	1.217	.0937	.0126	1.989	2.514
#2	-.0039	1.235	1.217	.0783	.0096	1.976	2.515
Check ?	None	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value		1.250	1.250			2.000	2.500
Range		10.00%	10.00%			10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0010	.0061
Stddev	.0000	.0007
%RSD	.6323	11.15
#1	.0010	.0066
#2	.0009	.0056
Check ?	None	None
Value		
Range		

Method: 2005A Sample Name: ICV2 Operator: WM
Comment: KA0500057 ICP2-85-A
Run Time: 04/19/05 09:54 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.0076	-.0060	.0004	.0000	.0109	.0007
Stddev	.0029	.0018	.0039	.0000	.0000	.0008	.0004
%RSD	207.7	23.11	64.74	3.983	48.33	7.477	61.47
#1	.0034	.0088	-.0087	.0003	.0000	.0115	.0010
#2	-.0007	.0063	-.0032	.0004	.0000	.0103	.0004
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.858	.0003	.0000	-.0025	24.90	-.0140	24.72
Stddev	.037	.0009	.000	.0015	.05	.0033	.08
%RSD	.7606	351.0	281.7	59.91	.2041	23.68	.3170
#1	4.832	-.0004	-.0001	-.0014	24.93	-.0117	24.78
#2	4.884	.0009	.0000	-.0035	24.86	-.0164	24.66
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	5.000				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0056	-.0021	.0124	.0013	-.0015	.0090
Stddev	.0001	.0020	.0004	.0272	.0006	.0034	.0052
%RSD	13.20	36.72	20.88	219.2	46.93	229.6	57.33
#1	.0005	.0070	-.0024	.0317	.0009	-.0039	.0127
#2	.0006	.0041	-.0018	-.0068	.0017	.0009	.0054
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	.0055	.0004	.0187	.2093	.0042	-.0068
Stddev	.0026	.0035	.0001	.0121	.0003	.0047	.0095
%RSD	378.2	63.15	23.60	64.35	.1403	113.4	141.0
#1	-.0025	.0080	.0005	.0102	.2091	.0075	-.0135
#2	.0011	.0031	.0004	.0273	.2096	.0008	.0000
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0004	-.0042
Stddev	.0004	.0030
%RSD	110.6	70.87
#1	.0007	-.0063
#2	.0001	-.0021
Check ?	None	None
Value		
Range		

Method: 2005A Sample Name: ICV3 Operator: WM
Comment: KA0500057 ICP2-88-D
Run Time: 04/19/05 09:58 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0182	.0050	-.0053	.0002	-.0001	5.117	-.0002
Stddev	.0074	.0109	.0031	.0003	.0001	.008	.0002
%RSD	40.60	217.6	58.65	170.0	116.1	.1478	100.8
#1	-.0130	.0128	-.0075	.0000	-.0001	5.112	-.0001
#2	-.0234	-.0027	-.0031	.0003	.0000	5.123	-.0004
Check ?	None	None	None	None	None	QC Pass	None
Value						5.000	
Range						10.00%	

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0015	.0008	.0009	-.0001	.0064	.0048
Stddev	.0037	.0011	.0005	.0018	.0002	.0003	.0078
%RSD	175.2	70.66	57.84	188.0	147.5	4.906	163.3
#1	-.0005	.0022	.0005	.0022	.0000	.0062	-.0007
#2	.0047	.0008	.0012	-.0003	-.0003	.0067	.0103
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0007	-.0011	.0073	.0021	-.0016	-.0021
Stddev	.0001	.0009	.0002	.0025	.0054	.0019	.0018
%RSD	422.2	120.7	22.74	34.81	253.7	121.4	87.91
#1	.0001	-.0013	-.0009	.0055	.0060	-.0030	-.0008
#2	.0000	-.0001	-.0012	.0091	-.0017	-.0002	-.0034
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.019	.0033	-.0011	4.881	4.734	-.0040	.0014
Stddev	.014	.0019	.0000	.101	.011	.0022	.0089
%RSD	.2828	59.25	1.273	2.058	.2256	53.71	626.0
#1	5.009	.0019	-.0012	4.952	4.726	-.0055	-.0048
#2	5.029	.0046	-.0011	4.810	4.742	-.0025	.0077
Check ?	QC Pass	None	None	QC Pass	QC Pass	None	None
Value	5.000			5.000	5.000		
Range	10.00%			10.00%	10.00%		

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	5.006	5.011
Stddev	.032	.012
%RSD	.6290	.2381
#1	5.028	5.019
#2	4.984	5.002
Check ?	QC Pass	QC Pass
Value	5.000	5.000
Range	10.00%	10.00%

Method: 2005A Sample Name: ICB Operator: WM
Comment: KA0500057
Run Time: 04/19/05 10:00 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0073	.0014	-.0002	.0001	.0001	.0017	.0000
Stddev	.0067	.0050	.0000	.0002	.0000	.0013	.000
%RSD	90.75	351.1	.3078	399.4	32.49	75.58	339.2
#1	-.0120	-.0021	-.0002	-.0001	.0001	.0026	.0000
#2	-.0026	.0050	-.0002	.0002	.0000	.0008	-.0001
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061	.0494	.0005	.0010	.0006	.0000	-.0034
Stddev	.0033	.0232	.0004	.0001	.0031	.0004	.0023
%RSD	54.36	47.03	70.62	13.17	491.8	1098.	67.93
#1	.0084	.0659	.0003	.0011	.0028	.0003	-.0018
#2	.0037	.0330	.0008	.0009	-.0016	-.0002	-.0050
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0099	-.0015	.0000	-.0017	.0002	-.0015
Stddev	.0018	.0213	.0039	.000	.0002	.0005	.0044
%RSD	170.8	215.2	258.7	191.8	9.433	201.0	288.2
#1	.0023	-.0052	-.0043	.0000	-.0016	-.0001	.0016
#2	-.0002	.0250	.0012	-.0001	-.0018	.0006	-.0046
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0030	-.0007	-.0001	-.0003	.0041	-.0002	-.0104
Stddev	.0018	.0006	.0017	.0003	.0002	.0003	.0016
%RSD	60.60	94.16	1806.	93.02	5.475	157.3	15.77
#1	-.0043	-.0002	.0011	-.0001	.0040	.0000	-.0093
#2	-.0017	-.0011	-.0013	-.0005	.0043	-.0004	-.0116
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.2000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.2000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0015	.0010	.0038	.0000	.0082
Stddev	.0003	.0022	.0054	.000	.0054
%RSD	21.81	224.0	141.2	25.85	66.49
#1	-.0018	-.0006	.0077	-.0001	.0043
#2	-.0013	.0025	.0000	.0000	.0120
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.0500	.0100	.0200
Low Limit	-.1000	-.0100	-.0500	-.0100	-.0200

Method: 2005A Sample Name: CCVA1 Operator: WM
Comment: KA0500057
Run Time: 04/19/05 10:03 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5080	.4960	.4797	.4878	.5613	.4969	.4936
Stddev	.0170	.0088	.0063	.0035	.0013	.0011	.0016
%RSD	3.354	1.772	1.314	.7206	.2368	.2249	.3180
#1	.5149	.4930	.4784	.4833	.5629	.4963	.4922
#2	.5273	.5091	.4808	.4873	.5599	.4975	.4923
#3	.5022	.4922	.4874	.4892	.5618	.4958	.4944
#4	.4876	.4899	.4721	.4916	.5607	.4982	.4954
Check ?	None	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value		.5000	.5000			.5000	.5000
Range		5.000%	5.000%			5.000%	5.000%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	Q .4698	.4984	.5001	.4838	.5007	.4929	Q 2.364
Stddev	.0054	.0011	.0003	.0079	.0017	.0077	.012
%RSD	1.141	.2258	.0683	1.639	.3427	1.571	.4967
#1	.4662	.4981	.5002	.4767	.5018	.4903	2.359
#2	.4682	.4981	.4996	.4795	.5025	.4871	2.380
#3	.4777	.5001	.5000	.4842	.4990	.5043	2.365
#4	.4670	.4976	.5004	.4948	.4995	.4898	2.352
Check ?	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4947	.4950	.4962	5.017	.4756	.4826	.5278
Stddev	.0020	.0025	.0017	.067	.0070	.0076	.0229
%RSD	.4014	.5074	.3398	1.334	1.468	1.578	4.345
#1	.4957	.4933	.4969	5.081	.4791	.4909	.5520
#2	.4948	.4988	.4944	5.067	.4772	.4867	.5428
#3	.4964	.4940	.4982	4.950	.4654	.4791	.5076
#4	.4919	.4940	.4954	4.970	.4807	.4739	.5089
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	5.000%	5.000%	5.000%		5.000%	5.000%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4870	.4859	.4946	-.0089	.2481	.4852	.4813
Stddev	.0029	.0028	.0034	.0051	.0021	.0028	.0037
%RSD	.6024	.5690	.6839	56.77	.8390	.5724	.7603
#1	.4843	.4887	.4927	-.0029	.2485	.4844	.4824
#2	.4910	.4845	.4908	-.0153	.2504	.4817	.4813
#3	.4856	.4828	.4975	-.0091	.2453	.4866	.4764
#4	.4870	.4877	.4975	-.0083	.2481	.4881	.4852
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	5.000%	5.000%	5.000%		5.000%	5.000%	5.000%

Sample Name: CCVA1 Run Time: 04/19/05 10:03

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0014	.0031
Stddev	.0011	.0025
%RSD	75.84	79.44
#1	.0023	.0016
#2	.0023	.0006
#3	.0003	.0042
#4	.0007	.0061
Check ?	None	None
Value		
Range		

Method: 2005A Sample Name: CCVB1 Operator: WM
Comment: KA0500057
Run Time: 04/19/05 10:19 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.992	.0151	-.0009	2.533	.1276	.0046	.0016
Stddev	.013	.0078	.0024	.011	.0005	.0012	.0002
%RSD	.2700	51.88	276.9	.4210	.3628	24.82	15.23
#1	5.002	.0052	-.0019	2.548	.1281	.0058	.0016
#2	4.974	.0148	-.0001	2.528	.1270	.0054	.0018
#3	4.989	.0244	-.0034	2.525	.1276	.0035	.0018
#4	5.002	.0160	.0021	2.530	.1276	.0038	.0013
Check ?	QC Pass	None	None	QC Pass	QC Pass	None	None
Value	5.000			2.500	.1250		
Range	5.000%			5.000%	5.000%		

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.24	.0012	.0001	-.0047	24.91	-.0171	25.37
Stddev	.22	.0003	.0007	.0011	.02	.0061	.09
%RSD	.8640	22.57	856.8	23.99	.0850	35.68	.3658
#1	25.24	.0016	.0003	-.0047	24.94	-.0159	25.44
#2	25.26	.0010	.0009	-.0061	24.89	-.0133	25.45
#3	25.49	.0010	-.0004	-.0034	24.90	-.0261	25.33
#4	24.96	.0014	-.0006	-.0045	24.90	-.0133	25.25
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	5.000%				5.000%		5.000%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	-.0042	-.0019	10.01	.0138	.0000	10.15
Stddev	.0001	.0003	.0013	.08	.0100	.002	.03
%RSD	4.808	6.729	70.94	.8238	72.01	3910.	.3333
#1	.0017	-.0046	-.0008	10.11	.0264	.0023	10.19
#2	.0017	-.0039	-.0034	9.930	.0043	-.0011	10.11
#3	.0017	-.0041	-.0007	9.966	.0170	-.0002	10.14
#4	.0015	-.0041	-.0025	10.05	.0077	-.0011	10.14
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				5.000%			5.000%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	.0061	.0014	2.575	-.0088	.0047	-.0296
Stddev	.0034	.0021	.0002	.021	.0017	.0032	.0048
%RSD	246.1	34.64	12.36	.7995	19.02	69.06	16.18
#1	.0006	.0074	.0016	2.546	-.0083	.0025	-.0272
#2	-.0022	.0062	.0014	2.595	-.0092	.0031	-.0320
#3	-.0059	.0031	.0012	2.577	-.0068	.0094	-.0349
#4	.0019	.0077	.0015	2.582	-.0108	.0036	-.0242
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				5.000%			

Sample Name: CCVB1 Run Time: 04/19/05 10:19

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5108	2.527
Stddev	.0035	.012
%RSD	.6826	.4907
#1	.5159	2.534
#2	.5078	2.530
#3	.5097	2.534
#4	.5100	2.508
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	5.000%	5.000%

Method: 2005A Sample Name: CCB1 Operator: WM
Comment: KA0500057
Run Time: 04/19/05 10:23 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0036	-.0046	.0024	.0008	.0000	-.0022	-.0001
Stddev	.0155	.0012	.0013	.0003	.0001	.0010	.0000
%RSD	426.1	25.53	54.38	33.31	727.1	45.24	46.91
#1	-.0146	-.0055	.0015	.0010	-.0001	-.0015	.0000
#2	.0073	-.0038	.0033	.0006	.0001	-.0029	-.0001
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0247	.0005	.0001	.0004	.0009	-.0006
Stddev	.0007	.0465	.0008	.0003	.0012	.0001	.0042
%RSD	138.5	188.1	150.9	347.0	280.6	6.743	749.8
#1	-.0010	-.0576	.0000	.0003	-.0004	.0009	.0024
#2	.0000	.0082	.0011	-.0001	.0013	.0010	-.0036
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0060	.0118	.0068	-.0001	-.0056	-.0010	.0060
Stddev	.0030	.0100	.0039	.0000	.0028	.0003	.0021
%RSD	50.22	84.09	57.58	42.48	49.02	30.58	34.63
#1	-.0081	.0189	.0040	-.0001	-.0037	-.0012	.0075
#2	-.0039	.0048	.0096	-.0001	-.0076	-.0008	.0045
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038	-.0042	.0031	-.0004	.0043	.0001	.0162
Stddev	.0030	.0002	.0006	.0006	.0004	.0002	.0022
%RSD	78.57	3.708	18.01	145.9	10.10	371.9	13.44
#1	.0060	-.0043	.0035	.0000	.0046	-.0001	.0178
#2	.0017	-.0041	.0027	-.0008	.0040	.0002	.0147
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.2000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.2000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0022	.0017	-.0116	.0003	.0029
Stddev	.0011	.0024	.0041	.0003	.0023
%RSD	49.42	140.1	35.40	87.57	78.76
#1	-.0029	.0033	-.0087	.0001	.0013
#2	-.0014	.0000	-.0145	.0006	.0045
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.0500	.0100	.0200
Low Limit	-.1000	-.0100	-.0500	-.0100	-.0200

Method: 2005A Sample Name: CRI Operator: WM
Comment: KA0500057 ICP2-86-B
Run Time: 04/19/05 10:40 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0366	.0477	.1033	.0053	.0050	-.0008	.0047
Stddev	.0014	.0068	.0008	.0002	.0000	.0009	.0004
%RSD	3.939	14.20	.7843	3.397	.7702	113.7	8.752
#1	.0356	.0429	.1039	.0054	.0049	-.0015	.0044
#2	.0376	.0525	.1027	.0052	.0050	-.0002	.0050
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None	QC Pass
Value	.0500	.0500	.1000	.0050	.0050		.0050
Range	100.0%	100.0%	100.0%	100.0%	100.0%		100.0%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0385	.0058	.0108	.0090	.0206	.0509	.0088
Stddev	.0047	.0003	.0007	.0027	.0002	.0030	.0025
%RSD	12.08	4.474	6.577	29.57	.8944	5.896	28.27
#1	.0418	.0060	.0113	.0109	.0207	.0488	.0106
#2	.0352	.0056	.0103	.0071	.0204	.0530	.0071
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0050	.0100	.0100	.0200	.0500	.0200
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	.0028	.0194	1.977	.0808	.0082	.1073
Stddev	.0002	.0012	.0006	.006	.0000	.0045	.0002
%RSD	3.150	41.46	3.180	.3250	.0373	54.93	.2268
#1	.0049	.0020	.0189	1.982	.0808	.0114	.1071
#2	.0047	.0037	.0198	1.973	.0808	.0050	.1074
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0100	.0200	2.000	.1000	.0100	.1000
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0092	.0092	.0015	-.0123	-.0003	-.0219
Stddev	.0009	.0022	.0003	.0087	.0017	.0016	.0076
%RSD	426.7	23.50	3.682	565.2	13.72	594.7	34.54
#1	.0004	.0077	.0094	-.0046	-.0111	.0008	-.0272
#2	-.0008	.0108	.0089	.0077	-.0135	-.0014	-.0165
Check ?	None	QC Pass	QC Pass	None	None	None	None
Value		.0100	.0100				
Range		100.0%	100.0%				

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0009	.0027
Stddev	.0001	.0057
%RSD	6.230	208.1
#1	.0009	-.0013
#2	.0008	.0067
Check ?	None	None
Value		
Range		

Method: 2005A Sample Name: ICSA Operator: WM
Comment: KA0500057 ICP2-84-B
Run Time: 04/19/05 10:44 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	487.0	.0541	-.0345	-.0012	.0003	.0059	.0018
Stddev	1.0	.0127	.0037	.0000	.0000	.0023	.0003
%RSD	.2147	23.54	10.62	3.848	4.189	39.62	17.83
#1	487.8	.0632	-.0371	-.0012	.0003	.0076	.0021
#2	486.3	.0451	-.0319	-.0012	.0003	.0043	.0016
Check ?	QC Pass	None	None	None	None	None	None
Value	500.0						
Range	20.00%						

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	507.8	.0022	-.0029	-.0100	180.2	-.0428	510.8
Stddev	1.5	.0015	.0003	.0009	.6	.0016	3.1
%RSD	.2905	68.91	11.67	8.963	.3549	3.669	.6029
#1	506.7	.0011	-.0026	-.0107	179.8	-.0439	508.6
#2	508.8	.0032	-.0031	-.0094	180.7	-.0417	512.9
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	500.0				200.0		500.0
Range	20.00%				20.00%		20.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088	-.0067	-.0034	.0772	-.0119	-.0037	.0314
Stddev	.0002	.0014	.0012	.0106	.0024	.0063	.0014
%RSD	1.757	21.25	36.35	13.75	20.20	169.4	4.608
#1	.0089	-.0057	-.0025	.0697	-.0136	-.0082	.0325
#2	.0086	-.0077	-.0042	.0847	-.0102	.0007	.0304
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0171	.0028	.0092	.0692	-.0233	.0242	-.0902
Stddev	.0036	.0017	.0007	.0093	.0004	.0037	.0000
%RSD	21.10	62.58	7.760	13.40	1.737	15.36	.0152
#1	-.0197	.0016	.0087	.0627	-.0230	.0216	-.0902
#2	-.0146	.0040	.0097	.0758	-.0236	.0269	-.0902
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0155	.0104
Stddev	.0001	.0066
%RSD	.5007	63.12
#1	.0155	.0058
#2	.0154	.0151
Check ?	None	None
Value		
Range		

ethod: 2005A Sample Name: ICSAB Operator: WM
omment: KA0500057 ICP2-78-B
un Time: 04/19/05 10:47 Type: QC Mode: CONC Corr.Fact: 1.000000

lem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
vg	486.9	1.009	-.0377	.4364	.4704	.0062	.8400
tddev	.4	.013	.0082	.0004	.0012	.0027	.0008
RSD	.0921	1.341	21.80	.0954	.2608	43.43	.0986
1	486.6	1.019	-.0319	.4361	.4712	.0081	.8406
2	487.2	.9997	-.0435	.4367	.4695	.0043	.8394
heck ?	QC Pass	QC Pass	None	QC Pass	QC Pass	None	QC Pass
alue	500.0	1.000		.5000	.5000		1.000
ange	20.00%	20.00%		20.00%	20.00%		20.00%

lem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
vg	510.1	.4411	.4264	.4446	181.3	.8194	515.2
tddev	2.1	.0015	.0011	.0047	.1	.0017	.5
RSD	.4146	.3410	.2483	1.067	.0778	.2036	.0886
1	511.6	.4400	.4257	.4480	181.2	.8182	514.9
2	508.6	.4422	.4272	.4413	181.4	.8206	515.6
heck ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
alue	500.0	.5000	.5000	.5000	200.0	1.000	500.0
ange	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%

lem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
vg	.4413	-.0094	.8430	.0622	-.0087	.9359	.0402
tddev	.0021	.0005	.0001	.0179	.0030	.0001	.0042
RSD	.4838	5.057	.0070	28.79	34.66	.0142	10.39
1	.4398	-.0097	.8430	.0495	-.0066	.9358	.0372
2	.4428	-.0090	.8429	.0748	-.0108	.9360	.0431
heck ?	QC Pass	None	QC Pass	None	None	QC Pass	None
alue	.5000		1.000			1.000	
ange	20.00%		20.00%			20.00%	

lem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
nits	ppm	ppm	ppm	ppm	ppm	ppm	ppm
vg	-.0204	.4399	.8426	.0762	-.0220	.0248	-.0966
tddev	.0013	.0113	.0004	.0093	.0022	.0010	.0041
RSD	6.347	2.573	.0497	12.19	9.777	3.884	4.286
1	-.0195	.4479	.8429	.0696	-.0205	.0241	-.0937
2	-.0213	.4319	.8423	.0827	-.0236	.0255	-.0995
heck ?	None	QC Pass	QC Pass	None	None	None	None
alue		.5000	1.000				
ange		20.00%	20.00%				

lem	Li6707	Sr3464
nits	ppm	ppm
vg	.0157	.0154
tddev	.0002	.0041
RSD	1.158	26.52
1	.0159	.0125
2	.0156	.0183
heck ?	None	None
alue		
ange		

Method: 2005A Sample Name: PBS Operator: WM
Comment: KA0500057 K2554 RE-DIGEST 1/2 DILUTION
Run Time: 04/19/05 10:51 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	.0004	.0085	.0006	.0000	.0010	.0000
#1	.0084	.0064	.0105	.0005	.0001	.0002	.0002
#2	-.0021	-.0056	.0065	.0007	.0000	.0018	-.0002

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066	.0003	.0001	.0015	.0043	-.0062	.0055
#1	.0094	.0007	.0000	.0002	.0046	-.0064	.0091
#2	.0038	-.0001	.0002	.0027	.0040	-.0060	.0020

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0072	-.0011	.0124	.0009	-.0015	.0143
#1	.0000	-.0066	-.0015	.0133	.0034	-.0039	.0180
#2	.0000	-.0079	-.0007	.0116	-.0017	.0009	.0106

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0130	.0035	.0000	.0239	.0185	.0040	-.0116
#1	.0124	.0034	-.0002	.0316	.0188	.0033	-.0087
#2	.0136	.0037	.0002	.0161	.0182	.0047	-.0145

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0005	.0018
#1	.0007	.0055
#2	.0002	-.0019

Method: 2005A Sample Name: LCSS Operator: WM
Comment: KA0500057 K2554 RE-DIGEST 1/2 DILUTION
Run Time: 04/19/05 10:53 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	48.90	.1747	1.065	1.067	.2629	.2997	.3500
#1	49.13	.1711	1.074	1.072	.2645	.3012	.3519
#2	48.68	.1784	1.055	1.061	.2614	.2982	.3480

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	60.04	.8254	1.220	.4970	78.07	.6480	15.67
#1	60.36	.8270	1.224	.5004	78.28	.6419	15.83
#2	59.72	.8237	1.216	.4935	77.86	.6541	15.51

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.151	.2686	.4200	20.40	.8828	.4917	5.535
#1	2.170	.2675	.4223	20.53	.8892	.4980	5.589
#2	2.132	.2697	.4177	20.27	.8764	.4854	5.480

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4906	.9698	1.449	5.387	8.624	1.556	.4277
#1	.4958	.9705	1.453	5.467	8.622	1.568	.4316
#2	.4854	.9690	1.445	5.307	8.626	1.545	.4239

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0406	.6694
#1	.0410	.6782
#2	.0402	.6606

Method: 2005A Sample Name: K2554-01 Operator: WM
Comment: KA0500057 RE-DIGEST 1/2 DILUTION
Run Time: 04/19/05 10:56 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	110.0	.0420	.0145	.3828	.0026	.0543	.0021
#1	110.5	.0440	.0204	.3849	.0026	.0559	.0013
#2	109.4	.0400	.0086	.3808	.0026	.0527	.0029

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.80	.3309	.0829	.1185	164.3	.0723	37.59
#1	20.11	.3320	.0835	.1211	165.0	.0654	37.80
#2	19.49	.3298	.0824	.1159	163.6	.0792	37.37

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.088	-.0018	.2229	14.70	-.0012	.0123	2.601
#1	1.094	-.0020	.2226	14.78	-.0008	.0117	2.605
#2	1.082	-.0015	.2231	14.61	-.0016	.0130	2.598

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	.2539	.3459	2.237	8.302	4.172	-.0684
#1	.0162	.2546	.3465	2.281	8.350	4.184	-.0780
#2	.0074	.2532	.3454	2.193	8.253	4.160	-.0587

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.1154	.1294
#1	.1156	.1273
#2	.1151	.1315

Method: 2005A Sample Name: K2554-01D Operator: WM
Comment: KA0500057 RE-DIGEST 1/2 DILUTION
Run Time: 04/19/05 10:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	109.3	.0289	.0173	.3667	.0025	.0638	.0024
#1	109.7	.0327	.0152	.3666	.0025	.0634	.0028
#2	108.9	.0251	.0194	.3669	.0024	.0642	.0020

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.06	.3308	.0614	.1244	152.4	.0418	37.00
#1	17.94	.3324	.0607	.1259	153.4	.0464	37.06
#2	18.18	.3292	.0620	.1228	151.4	.0372	36.93

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.059	-.0021	.2128	14.18	.0039	.0057	2.651
#1	1.055	-.0030	.2141	14.17	-.0025	.0043	2.647
#2	1.064	-.0011	.2116	14.19	.0103	.0072	2.655

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	.2292	.3311	2.011	8.393	4.016	-.0670
#1	.0123	.2345	.3303	2.056	8.410	4.024	-.0626
#2	.0061	.2239	.3320	1.967	8.377	4.009	-.0714

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.1165	.1233
#1	.1162	.1290
#2	.1169	.1177

Method: 2005A Sample Name: K2554-01S Operator: WM
Comment: KA0500057 RE-DIGEST 1/2 DILUTION
Run Time: 04/19/05 11:02 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	119.0	.1790	.5080	2.619	.0535	.5000	.0506
#1	119.7	.1781	.5113	2.626	.0537	.5018	.0502
#2	118.3	.1799	.5047	2.612	.0534	.4982	.0511

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.26	.5235	.5494	.3450	167.0	.5455	36.77
#1	18.17	.5249	.5504	.3481	167.3	.5431	36.90
#2	18.35	.5222	.5484	.3420	166.7	.5479	36.63

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.497	.4492	.7063	15.17	.4937	.0488	3.304
#1	1.496	.4494	.7061	15.33	.5077	.0489	3.336
#2	1.497	.4490	.7065	15.00	.4797	.0488	3.273

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052	.7313	.8229	2.360	8.181	3.772	.4460
#1	.0050	.7249	.8236	2.349	8.201	3.783	.4397
#2	.0054	.7377	.8222	2.371	8.162	3.761	.4523

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.1115	.1649
#1	.1130	.1611
#2	.1099	.1688

Method: 2005A Sample Name: K2554-01L Operator: WM
Comment: KA0500057 RE-DIGEST 1/10 DILUTION
Run Time: 04/19/05 11:04 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.70	.0204	-.0006	.0760	.0006	.0140	.0004
#1	20.67	.0236	.0019	.0766	.0005	.0143	.0003
#2	20.73	.0171	-.0032	.0754	.0006	.0137	.0005

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.891	.0656	.0159	.0251	30.79	.0026	7.165
#1	3.898	.0655	.0161	.0210	30.76	.0018	7.140
#2	3.883	.0657	.0158	.0291	30.82	.0035	7.191

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2030	-.0061	.0424	2.835	-.0145	.0028	.5263
#1	.2027	-.0071	.0420	2.833	-.0060	.0026	.5234
#2	.2032	-.0051	.0427	2.836	-.0230	.0029	.5292

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0478	.0695	.4017	1.525	.8072	-.0362
#1	.0013	.0487	.0689	.3867	1.526	.8061	-.0337
#2	.0021	.0468	.0701	.4166	1.525	.8083	-.0386

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0231	.0263
#1	.0228	.0254
#2	.0233	.0273

Method: 2005A Sample Name: CCVA2 Operator: WM
Comment: KA0500057
Run Time: 04/19/05 11:09 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5165	.5040	.5015	.4962	.5723	.5030	.4943
Stddev	.0096	.0029	.0075	.0006	.0003	.0006	.0008
%RSD	1.865	.5717	1.488	.1249	.0552	.1147	.1666
#1	.5097	.5060	.4962	.4966	.5725	.5026	.4949
#2	.5233	.5019	.5068	.4957	.5720	.5034	.4937
Check ?	None	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value		.5000	.5000			.5000	.5000
Range		10.00%	10.00%			10.00%	10.00%

Elem	Ca3179	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4680	.5064	.5089	.4922	.5103	.4969	2.413
Stddev	.0019	.0018	.0024	.0042	.0012	.0040	.016
%RSD	.4066	.3634	.4760	.8610	.2410	.7949	.6731
#1	.4667	.5051	.5072	.4952	.5095	.4941	2.401
#2	.4694	.5077	.5106	.4892	.5112	.4997	2.424
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000	.5000	.5000	.5000	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5030	.4986	.5047	5.059	.4838	.4944	.5518
Stddev	.0003	.0047	.0003	.033	.0139	.0088	.0018
%RSD	.0625	.9511	.0580	.6584	2.865	1.776	.3261
#1	.5027	.4952	.5045	5.082	.4936	.4882	.5506
#2	.5032	.5020	.5049	5.035	.4740	.5006	.5531
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	None
Value	.5000	.5000	.5000		.5000	.5000	
Range	10.00%	10.00%	10.00%		10.00%	10.00%	

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4886	.4895	.5010	.0145	.2496	.4802	.4838
Stddev	.0007	.0027	.0013	.0093	.0003	.0005	.0034
%RSD	.1481	.5566	.2611	64.25	.1079	.1016	.7129
#1	.4891	.4876	.5001	.0210	.2494	.4806	.4862
#2	.4881	.4914	.5019	.0079	.2498	.4799	.4813
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	.5000	.5000	.5000		.2500	.5000	.5000
Range	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.0023	.0085
Stddev	.0006	.0002
%RSD	24.89	2.669
#1	.0019	.0087
#2	.0027	.0083
Check ?	None	None
Value		
Range		

Method: 2005A Sample Name: CCVB2 Operator: WM
Comment: KA0500057
Run Time: 04/19/05 11:11 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.035	.0157	.0037	2.567	.1309	.0027	.0017
Stddev	.007	.0165	.0018	.007	.0002	.0020	.0003
%RSD	.1461	105.0	48.23	.2928	.1361	76.30	17.90
#1	5.041	.0274	.0050	2.572	.1308	.0041	.0015
#2	5.030	.0040	.0025	2.561	.1310	.0012	.0019
Check ?	QC Pass	None	None	QC Pass	QC Pass	None	None
Value	5.000			2.500	.1250		
Range	10.00%			10.00%	10.00%		

Elem	Ca3181	Cr2677	Co2286	Cu3247	Fe2714	Pb2203	Mg2025
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.05	.0012	.0000	-.0053	25.27	-.0135	25.32
Stddev	.08	.0006	.0001	.0003	.00	.0021	.01
%RSD	.3015	48.23	353.2	5.669	.0040	15.67	.0431
#1	25.11	.0008	.0001	-.0051	25.27	-.0150	25.33
#2	25.00	.0017	-.0001	-.0055	25.27	-.0120	25.31
Check ?	QC Pass	None	None	None	QC Pass	None	QC Pass
Value	25.00				25.00		25.00
Range	10.00%				10.00%		10.00%

Elem	Mn2576	Mo2020	Ni2316	K_7664	Se1960	Ag3280	Na5895
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	-.0028	-.0013	10.07	.0004	-.0011	10.06
Stddev	.0000	.0016	.0015	.05	.0018	.0000	.09
%RSD	2.659	56.81	111.7	.4908	423.4	.6030	.9299
#1	.0016	-.0017	-.0024	10.11	-.0009	-.0011	10.13
#2	.0017	-.0039	-.0003	10.04	.0017	-.0011	9.993
Check ?	None	None	None	QC Pass	None	None	QC Pass
Value				10.00			10.00
Range				10.00%			10.00%

Elem	Sn1899	V_3102	Zn2062	P_1782	Si2516	Ti3234	Tl1908
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0028	.0051	.0016	2.659	-.0061	.0047	-.0262
Stddev	.0026	.0054	.0000	.061	.0020	.0000	.0124
%RSD	91.93	106.9	2.843	2.278	32.08	.1482	47.18
#1	-.0010	.0089	.0016	2.702	-.0075	.0047	-.0175
#2	-.0047	.0012	.0017	2.616	-.0047	.0047	-.0349
Check ?	None	None	None	QC Pass	None	None	None
Value				2.500			
Range				10.00%			

Elem	Li6707	Sr3464
Units	ppm	ppm
Avg	.5180	2.528
Stddev	.0027	.001
%RSD	.5211	.0542
#1	.5199	2.527
#2	.5161	2.529
Check ?	QC Pass	QC Pass
Value	.5000	2.500
Range	10.00%	10.00%

Method: 2005A Sample Name: CCB2 Operator: WM
Comment: KA0500057
Run Time: 04/19/05 11:14 Type: Blank Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0031	.0005	.0098	.0005	-.0001	-.0004	-.0003
Stddev	.0059	.0025	.0000	.0004	.0001	.0009	.0004
%RSD	188.9	535.4	.0369	78.48	119.9	248.4	141.5
#1	.0010	-.0013	.0098	.0002	.0000	.0003	-.0006
#2	-.0073	.0022	.0098	.0008	-.0001	-.0010	.0000
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.1000	.0050	.0050	.0500	.0050
Low Limit	-.0500	-.0500	-.1000	-.0050	-.0050	-.0500	-.0050

Elem	Ca3179	Ca3181	Cr2677	Co2286	Cu3247	Fe2599	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	-.0206	-.0002	.0003	.0028	.0011	.0001
Stddev	.0080	.0291	.0001	.0004	.0028	.0004	.0056
%RSD	426.1	141.1	24.00	153.5	99.66	39.49	5196.
#1	.0075	.0000	-.0002	.0000	.0048	.0014	.0041
#2	-.0038	-.0412	-.0003	.0006	.0008	.0008	-.0038
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0500	.0050	.0100	.0100	.0200	.0200
Low Limit	-.0500	-.0500	-.0050	-.0100	-.0100	-.0200	-.0200

Elem	Pb2203	Mg2025	Mg2852	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0032	H .0276	.0063	.0000	-.0054	-.0014	-.0055
Stddev	.0003	.0122	.0025	.000	.0009	.0008	.0006
%RSD	9.536	44.07	39.57	427.1	17.67	57.94	11.34
#1	-.0034	.0190	.0081	.0000	-.0047	-.0008	-.0059
#2	-.0030	.0362	.0045	-.0001	-.0060	-.0019	-.0050
Check ?	LC Pass	LC Fail	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.0500	.0200	.0200	.0050	.0100	.0200	.2000
Low Limit	-.0500	-.0200	-.0200	-.0050	-.0100	-.0200	-.2000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062	P_1782
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077	.0001	.0031	.0036	.0006	.0002	.0116
Stddev	.0168	.0018	.0019	.0025	.0061	.0003	.0033
%RSD	220.0	1544.	62.66	68.76	968.4	155.5	28.06
#1	-.0043	.0014	.0017	.0018	.0049	.0000	.0139
#2	.0196	-.0011	.0045	.0053	-.0037	.0005	.0093
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.2000	.0500	.0100	.0100	.2000
Low Limit	-.1000	-.0100	-.2000	-.0500	-.0100	-.0100	-.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr3464
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0018	.0004	-.0024	.0005	.0055
Stddev	.0007	.0006	.0089	.0001	.0032
%RSD	36.94	137.1	367.0	22.31	58.27
#1	-.0013	.0000	-.0087	.0006	.0032
#2	-.0023	.0008	.0039	.0004	.0077
Check ?	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High Limit	.1000	.0100	.0500	.0100	.0200
Low Limit	-.1000	-.0100	-.0500	-.0100	-.0200

Service Request # K2502554 (HNO3 Digest)
Calibration 04-14-05A
QC in calibration 04-14-05A
QC Service Request # K2502554

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	✓		
2. ICV within 10 % of true value	✓		
3. CCV's in control	✓		
4. CCB's and/or ICB's below MRL	✓		
5. Method blank below MRL	✓		
6. LCS in control	✓		
7. Spike and duplicate in control	✓		
8. All analytes within instrument linear range	✓		
9. Adequate rinse out time allowed	✓		
10. Internal standards in control	✓		
11. Interferences checked	✓		
12. Se over MRL		✓	
13. CRA run	✓		
14. ICSA and ICSAB in control			✓
15. Serial dilution run			✓
16. Post spike in control			✓

Comments:

Primary Review by SC Date 4/14/05
Secondary Review by [signature] Date 4/15/05
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution
1	Calibration Blank	Blank	0 kg	0 ml	1.00
2	25 ppb Std. MS6-95-D	Fully Quant Standard	0 kg	0 ml	1.00
3	ICV MS6-93-E	Unknown	0 kg	0 ml	1.00
4	CCV1 MS6-95-D	Unknown	0 kg	0 ml	1.00
5	ICB	Unknown	0 kg	0 ml	1.00
6	CCB1	Unknown	0 kg	0 ml	1.00
7	CRA SOIL MS6-65-E	Unknown	0 kg	0 ml	1.00
8	ICSA MS6-94-B	Unknown	0 kg	0 ml	1.00
9	ICSAB MS6-94-C	Unknown	0 kg	0 ml	1.00
10	PBS K2554 1/5	Unknown	0 kg	0 ml	1.00
11	LCSS K2554 1/20	Unknown	0 kg	0 ml	1.00
12	K2554-01 1/5	Unknown	0 kg	0 ml	1.00
13	K2554-01 1/10	Unknown	0 kg	0 ml	1.00
14	K2554-01D 1/10	Unknown	0 kg	0 ml	1.00
15	K2554-01S 1/25	Unknown	0 kg	0 ml	1.00
16	PBS K2172 1/5	Unknown	0 kg	0 ml	1.00
17	CCV2 MS6-95-D	Unknown	0 kg	0 ml	1.00
18	CCB2	Unknown	0 kg	0 ml	1.00
19	LCSS K2172 1/20	Unknown	0 kg	0 ml	1.00
20	K2172-01 1/5	Unknown	0 kg	0 ml	1.00
21	K2172-01D 1/5	Unknown	0 kg	0 ml	1.00
22	K2172-01 1/10	Unknown	0 kg	0 ml	1.00
23	K2172-01D 1/10	Unknown	0 kg	0 ml	1.00
24	K2172-01S 1/25	Unknown	0 kg	0 ml	1.00
25	K2172-02 1/10	Unknown	0 kg	0 ml	1.00
26	K2172-02L 1/10 X 1/5	Unknown	0 kg	0 ml	1.00
27	K2172-02A 1/10 +100	Unknown	0 kg	0 ml	1.00
28	CCV3 MS6-95-D	Unknown	0 kg	0 ml	1.00
29	CCB3	Unknown	0 kg	0 ml	1.00
30	K2172-01 1/10 X 1/10	Unknown	0 kg	0 ml	1.00
31	K2172-01D 1/10 X 1/10	Unknown	0 kg	0 ml	1.00
32	CCV4 MS6-95-D	Unknown	0 kg	0 ml	1.00
33	CCB4	Unknown	0 kg	0 ml	1.00

Instrument Setup - Sample Configuration

Sample	Configuration	Date
All Samples	jchan	7:47:53 4/14/05

Instrument Setup - Configurations

Configuration Name - jchan
Description - PQExcell CCT Sim Default
Date - 7:47:53 4/14/05
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-645.00
Lens1	7.70
Lens2	-60.50
Lens3	-93.20
Pole Bias	1.00
Sampling Depth	410.00
Horizontal	-55.00
Vertical	66.00
Cool	13.00
Auxiliary	0.70
Nebuliser	0.84
Forward power	1,385.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-32.20
Focus	18.50

ExCell Mass Calibration Date: 4/14/05

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include
7.016	1630	0.613	0.071	TRUE
23.985	5938	0.664	0.035	TRUE
26.982	6692	0.664	0.001	TRUE
43.956	11011	0.715	-0.005	TRUE
44.956	11264	0.766	-0.012	TRUE
50.944	12785	0.766	-0.026	TRUE
51.94	13039	0.817	-0.026	TRUE
52.941	13292	0.766	-0.032	TRUE
53.949	13552	0.766	-0.02	TRUE
55.935	14059	0.766	-0.015	TRUE
56.935	14319	0.766	0.006	TRUE
57.934	14566	0.766	-0.023	TRUE
58.933	14813	0.766	-0.052	TRUE
61.928	15593	0.766	0.015	TRUE
62.93	15840	0.766	-0.017	TRUE
75.92	19155	0.765	0.005	TRUE
114.904	29103	0.714	0.044	TRUE
137.906	34972	0.764	0.046	TRUE
139.905	35479	0.764	0.034	TRUE
202.972	51580	0.712	0.005	TRUE
204.972	52087	0.712	-0.011	TRUE
205.974	52347	0.712	0.004	TRUE
206.976	52600	0.763	-0.008	TRUE
207.977	52860	0.661	0.008	TRUE
208.98	53114	0.712	-0.002	TRUE
238.051	60543	0.661	-0.025	TRUE

Excluded In Calib | Excluded In Results | Peak Run Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard E-Calibration Edited I-Invalid Calibration V-Valley Integration Failed
F-Interference Correction Failed T-Tripped P-Pulse Counting M-Result Over Max

Run	Label	TimeStamp	5Bkg	7Li	9Be	59Co	115In	208Pb
1	Stability 4/14/05	4/14/05 8:07:09 AM	(P)0.167	(P)7988.067	(P)2978.144	(P)31963.900	(P)55373.163	(P)27562.399
2	Stability 4/14/05	4/14/05 8:08:12 AM	(P)0.000	(P)8223.369	(P)2980.478	(P)32299.983	(P)57012.436	(P)27904.895
3	Stability 4/14/05	4/14/05 8:09:14 AM	(P)0.667	(P)8513.037	(P)3057.661	(P)33094.635	(P)58094.793	(P)28716.668
4	Stability 4/14/05	4/14/05 8:10:17 AM	(P)0.000	(P)8402.305	(P)3007.818	(P)32632.578	(P)57273.671	(P)28282.637
5	Stability 4/14/05	4/14/05 8:11:19 AM	(P)0.333	(P)8634.278	(P)3054.661	(P)32815.663	(P)57972.119	(P)28598.600
	Mean of Stability 4/1	4/14/05 8:06:32 AM	(P)0.233	(P)8352.211	(P)3015.752	(P)32561.352	(P)57145.236	(P)28213.040
	SD of Stability 4/14/05		(P)0.279	(P)253.544	(P)38.703	(P)441.418	(P)1090.845	(P)480.996
	%RSD of Stability 4/		(P)119.523	(P)3.036	(P)1.283	(P)1.356	(P)1.909	(P)1.705

Run	Label	TimeStamp	209Bi	220Bkg	238U
1	Stability 4/14/05	4/14/05 8:07:09 AM	(P)47685.123	(P)0.167	(P)44049.324
2	Stability 4/14/05	4/14/05 8:08:12 AM	(P)48456.710	(P)0.167	(P)44670.082
3	Stability 4/14/05	4/14/05 8:09:14 AM	(P)49469.339	(P)0.167	(P)45791.297
4	Stability 4/14/05	4/14/05 8:10:17 AM	(P)48749.538	(P)0.167	(P)45286.853
5	Stability 4/14/05	4/14/05 8:11:19 AM	(P)49476.702	(P)0.167	(P)45763.191
	Mean of Stability 4/1	4/14/05 8:06:32 AM	(P)48767.483	(P)0.167	(P)45112.149
	SD of Stability 4/14/05		(P)752.329	(P)0.000	(P)748.438
	%RSD of Stability 4/		(P)1.543	(P)0.000	(P)1.659

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Analytical Batch
KA0500452

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name: TimeStamp		Calibration Blank 4/14/05 8:35			Mean	SD	%RSD
Arsenic	75	0.0092	-0.0186	0.0094	**0**	0.0161	0
Cadmium	111	0.0005	0	-0.0004	**0**	0.0005	0
Cadmium	114	0.0002	-0.0003	0.0001	**0**	0.0002	0
Chromium	52	0	0.0002	-0.0001	**0**	0.0002	0
Chromium	53	-0.1484	0.2476	-0.0992	**0**	0.2159	0
Copper	63	-0.0535	-0.0522	0.1057	**0**	0.0915	0
Copper	65	0.0009	0.0022	-0.0032	**0**	0.0028	0
Lead	206	0.001	0.0004	-0.0014	**0**	0.0013	0
Lead	207	0	0.0005	-0.0006	**0**	0.0006	0
Lead	208	-0.0001	0.0004	-0.0004	**0**	0.0004	0
Molybdenum	95	0.0004	0.0001	-0.0005	**0**	0.0004	0
Molybdenum	97	-0.0007	-0.0013	0.002	**0**	0.0017	0
Molybdenum	98	-0.0003	-0.0004	0.0007	**0**	0.0006	0
Nickel	60	0.0075	-0.0142	0.0067	**0**	0.0123	0
Nickel	62	-0.4364	-0.8048	1.241	**0**	1.091	0
Selenium	77	-0.1479	0.1223	0.0256	**0**	0.1369	0
Selenium	78	-0.0273	-0.0006	0.0279	**0**	0.0277	0
Selenium	82	0.006	-0.0129	0.0068	**0**	0.0111	0
Thallium	203	-0.0001	-0.0001	0.0002	**0**	0.0002	0
Thallium	205	0	0.0001	-0.0001	**0**	0.0001	0
Zinc	66	0.0014	0.0021	-0.0035	**0**	0.0031	0
Zinc	67	0.0786	-0.0691	-0.0095	**0**	0.0743	0
Zinc	68	0.0003	-0.0044	0.0041	**0**	0.0043	0

JA-CA 4/14/05

Internal Standard Factors:

Scandium	45	1.026	0.997	0.979	**1.026**	n/a	n/a
Indium	115	1.024	0.991	0.985	**1.024**	n/a	n/a
Lutetium	175	1.012	0.997	0.991	**1.012**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		25 ppb Std. MS6-95-D			Mean	SD	%RSD
TimeStamp		4/14/05 8:38					
Arsenic	75	25.2	25.03	24.77	**25**	0.2165	0.8659
Cadmium	111	25.06	24.79	25.15	**25**	0.186	0.7439
Cadmium	114	25.07	24.87	25.06	**25**	0.1134	0.4538
Chromium	52	25	24.97	25.03	**25**	0.0332	0.1328
Chromium	53	25.25	24.89	24.86	**25**	0.2163	0.8651
Copper	63	25.32	24.89	24.79	**25**	0.282	1.128
Copper	65	24.93	24.95	25.12	**25**	0.1064	0.4256
Lead	206	24.6	25.27	25.13	**25**	0.3506	1.403
Lead	207	24.7	25.14	25.16	**25**	0.2627	1.051
Lead	208	24.57	25.27	25.16	**25**	0.3793	1.517
Molybdenum	95	25.13	24.65	25.22	**25**	0.3094	1.237
Molybdenum	97	25.07	24.89	25.04	**25**	0.0941	0.3764
Molybdenum	98	25.17	24.91	24.92	**25**	0.1472	0.5887
Nickel	60	25.2	24.92	24.89	**25**	0.1705	0.6819
Nickel	62	26.58	22.99	25.43	**25**	1.835	7.34
Selenium	77	25.27	24.43	25.3	**25**	0.4908	1.963
Selenium	78	25.02	24.95	25.03	**25**	0.0447	0.1788
Selenium	82	25.22	24.85	24.93	**25**	0.198	0.792
Thallium	203	24.67	25.33	25	**25**	0.3294	1.318
Thallium	205	24.63	25.18	25.19	**25**	0.324	1.296
Zinc	66	25.12	25.02	24.86	**25**	0.1274	0.5094
Zinc	67	24.93	25.06	25.01	**25**	0.0672	0.269
Zinc	68	25.17	24.97	24.85	**25**	0.161	0.6442

Internal Standard Factors:

Scandium	45	1.059	0.996	0.975	**1.059**	n/a	n/a
Indium	115	1.059	0.979	0.963	**1.059**	n/a	n/a
Lutetium	175	1.06	1.016	0.993	**1.06**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		ICV MS6-93-E			Mean	SD	%RSD
TimeStamp		4/14/05 8:41					
Arsenic	75	26.39	26.53	26.73	**26.55**	0.1706	0.6424
Cadmium	111	12.88	12.85	12.78	**12.84**	0.0507	0.3951
Cadmium	114	12.72	12.92	12.89	**12.84**	0.1075	0.8372
Chromium	52	10.24	10.19	10.18	**10.2**	0.0322	0.3156
Chromium	53	10.34	10.01	10.47	**10.27**	0.2364	2.301
Copper	63	12.71	12.76	12.77	**12.75**	0.0356	0.2796
Copper	65	12.83	12.76	12.9	**12.83**	0.0687	0.5354
Lead	206	24.07	24.31	24.26	**24.22**	0.1259	0.52
Lead	207	27.3	27.54	27.64	**27.5**	0.1738	0.6321
Lead	208	25.87	25.97	26.24	**26.02**	0.1911	0.7342
Molybdenum	95	24.99	25.25	25.14	**25.13**	0.1293	0.5146
Molybdenum	97	25.24	25.13	25.24	**25.2**	0.0678	0.2689
Molybdenum	98	25.01	25.12	25.21	**25.12**	0.1001	0.3987
Nickel	60	25.35	25.51	25.69	**25.51**	0.1712	0.6712
Nickel	62	23.03	24.33	26.03	**24.47**	1.501	6.137
Selenium	77	26.54	27.12	27.18	**26.95**	0.3517	1.305
Selenium	78	26.75	26.88	27.07	**26.9**	0.1605	0.5965
Selenium	82	27.01	27.52	27.64	**27.39**	0.3345	1.221
Thallium	203	25.66	25.87	26.26	**25.93**	0.3042	1.173
Thallium	205	25.69	26.16	26.2	**26.01**	0.2844	1.093
Zinc	66	26.42	26.45	26.6	**26.49**	0.0984	0.3714
Zinc	67	31.45	31.37	31.39	**31.4**	0.0412	0.1312
Zinc	68	29.96	30.32	30.09	**30.12**	0.1818	0.6035

Internal Standard Factors:

Scandium	45	1.074	1.016	1.003	**1.074**	n/a	n/a
Indium	115	1.072	1.004	0.979	**1.072**	n/a	n/a
Lutetium	175	1.127	1.066	1.05	**1.127**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		CCV1 MS6-95-D			Mean	SD	%RSD
TimeStamp		4/14/05 8:44					
Arsenic	75	25.23	25.14	25.27	**25.21**	0.0637	0.2527
Cadmium	111	25.21	24.64	25.27	**25.04**	0.3498	1.397
Cadmium	114	25.22	24.93	25.01	**25.05**	0.1466	0.585
Chromium	52	25.21	24.92	25.11	**25.08**	0.1464	0.5837
Chromium	53	24.65	24.38	24.7	**24.58**	0.1726	0.7023
Copper	63	25.31	25.42	25.74	**25.49**	0.2224	0.8724
Copper	65	25.17	25.11	25.19	**25.16**	0.0424	0.1684
Lead	206	24.59	25.08	25.02	**24.9**	0.2637	1.059
Lead	207	24.84	25.14	25.37	**25.12**	0.2702	1.076
Lead	208	24.76	25.14	25.21	**25.04**	0.2385	0.9528
Molybdenum	95	24.93	24.77	25.15	**24.95**	0.1912	0.7664
Molybdenum	97	25.11	24.78	25.15	**25.01**	0.1993	0.7967
Molybdenum	98	25.24	24.89	25.17	**25.1**	0.1856	0.7393
Nickel	60	25.07	24.89	25.2	**25.06**	0.155	0.6187
Nickel	62	28.69	30.66	32.71	**30.69**	2.009	6.545
Selenium	77	25.06	25	25.65	**25.24**	0.3572	1.415
Selenium	78	25.18	24.91	25.6	**25.23**	0.349	1.383
Selenium	82	25.32	25.46	25.72	**25.5**	0.2055	0.8059
Thallium	203	25.02	25.43	25.49	**25.31**	0.2553	1.009
Thallium	205	25.11	25.18	25.45	**25.25**	0.1764	0.6988
Zinc	66	24.98	25.09	25.16	**25.07**	0.0899	0.3587
Zinc	67	24.73	24.94	24.93	**24.87**	0.1171	0.4708
Zinc	68	25.05	24.92	24.9	**24.96**	0.0779	0.312

Internal Standard Factors:

Scandium	45	1.062	0.999	0.986	**1.062**	n/a	n/a
Indium	115	1.064	0.979	0.977	**1.064**	n/a	n/a
Lutetium	175	1.072	1.01	1.007	**1.072**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		ICB			Mean	SD	%RSD
TimeStamp		4/14/05 8:48					
Arsenic	75	0.0008	-0.0228	-0.057	**-0.0264**	0.0291	110.3
Cadmium	111	0.0027	0.0016	0.0009	**0.0017**	0.0009	53.54
Cadmium	114	0.0029	0.001	0.0008	**0.0016**	0.0011	71.76
Chromium	52	0.0125	0.0052	0.0114	**0.0097**	0.0039	40.54
Chromium	53	-0.5565	-0.5234	-0.8066	**-0.6288**	0.1549	24.63
Copper	63	0.5941	0.3415	0.2428	**0.3928**	0.1812	46.12
Copper	65	0.0144	0.004	0.0027	**0.0071**	0.0064	91
Lead	206	0.0016	0.0029	0.001	**0.0018**	0.001	52.84
Lead	207	0.0043	0.0007	-0.003	**0.0007**	0.0037	549.7
Lead	208	0.0033	0.0016	0.0001	**0.0017**	0.0016	94.55
Molybdenum	95	0.044	0.025	0.0214	**0.0301**	0.0121	40.3
Molybdenum	97	0.0449	0.0251	0.0266	**0.0322**	0.011	34.25
Molybdenum	98	0.0454	0.0287	0.0201	**0.0314**	0.0129	41.08
Nickel	60	0.0486	0.0305	0.0346	**0.0379**	0.0095	25.08
Nickel	62	10.26	6.195	4.823	**7.093**	2.828	39.87
Selenium	77	0.0942	0.2223	0.2441	**0.1869**	0.081	43.34
Selenium	78	0.1758	0.4266	0.251	**0.2845**	0.1287	45.24
Selenium	82	0.0127	-0.0278	0.005	**-0.0034**	0.0215	635.9
Thallium	203	0.0093	0.0054	0.0039	**0.0062**	0.0028	44.99
Thallium	205	0.0083	0.0054	0.0035	**0.0057**	0.0024	42.34
Zinc	66	0.0202	0.0131	0.0212	**0.0182**	0.0044	24.28
Zinc	67	-0.0085	-0.0629	-0.0287	**-0.0333**	0.0275	82.47
Zinc	68	0.0232	0.027	0.0287	**0.0263**	0.0028	10.7

Internal Standard Factors:

Scandium	45	1.104	1.043	1.021	**1.104**	n/a	n/a
Indium	115	1.117	1.04	1.016	**1.117**	n/a	n/a
Lutetium	175	1.097	1.042	1.018	**1.097**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		4/14/05 8:50					
Arsenic	75	-0.0306	-0.0164	-0.0913	**-0.0461**	0.0398	86.39
Cadmium	111	0.0009	0.0016	0.0009	**0.0011**	0.0004	33.64
Cadmium	114	0.001	0.0013	0.0013	**0.0012**	0.0002	16.23
Chromium	52	0.0056	0.0054	0.0125	**0.0078**	0.004	51.51
Chromium	53	-0.5918	-0.9549	-0.5929	**-0.7132**	0.2093	29.35
Copper	63	0.2471	0.2154	0.7906	**0.4177**	0.3233	77.4
Copper	65	0.0049	0.0092	0.018	**0.0107**	0.0066	62.16
Lead	206	0.0009	0.0023	0.0008	**0.0013**	0.0009	64.36
Lead	207	0.0011	0.0025	0.0003	**0.0013**	0.0011	87.71
Lead	208	0.0014	0.0019	0.0012	**0.0015**	0.0003	23.09
Molybdenum	95	0.0154	0.0119	0.0112	**0.0128**	0.0022	17.26
Molybdenum	97	0.0092	0.0095	0.0095	**0.0094**	0.0002	1.676
Molybdenum	98	0.0167	0.0113	0.0124	**0.0135**	0.0029	21.16
Nickel	60	0.0466	0.0529	0.0369	**0.0454**	0.0081	17.73
Nickel	62	4.261	5.347	12.73	**7.447**	4.61	61.9
Selenium	77	0.2553	0.1345	0.32	**0.2366**	0.0941	39.79
Selenium	78	0.1595	0.1423	0.2675	**0.1897**	0.0678	35.76
Selenium	82	-0.0108	-0.0168	-0.0845	**-0.0374**	0.0409	109.6
Thallium	203	0.0024	0.0019	0.0021	**0.0021**	0.0003	12.3
Thallium	205	0.003	0.0022	0.0024	**0.0025**	0.0004	17.01
Zinc	66	0.0395	0.0246	0.0402	**0.0348**	0.0088	25.41
Zinc	67	-0.0466	-0.0362	-0.0292	**-0.0373**	0.0087	23.45
Zinc	68	0.0377	0.0403	0.0621	**0.0467**	0.0134	28.69

Internal Standard Factors:

Scandium	45	1.041	1.006	0.998	**1.041**	n/a	n/a
Indium	115	1.055	1.019	1.001	**1.055**	n/a	n/a
Lutetium	175	1.051	1.026	1.011	**1.051**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		CRA SOIL MS6-65-E			Mean	SD	%RSD
TimeStamp		4/14/05 8:53					
Arsenic	75	1.046	0.9874	0.9923	**1.009**	0.0327	3.245
Cadmium	111	0.0433	0.0416	0.0437	**0.0429**	0.0011	2.604
Cadmium	114	0.045	0.0431	0.0498	**0.046**	0.0034	7.407
Chromium	52	0.428	0.4291	0.4158	**0.4243**	0.0074	1.742
Chromium	53	-0.2254	-0.2865	-0.2044	**-0.2388**	0.0426	17.85
Copper	63	1.125	1.345	2.02	**1.496**	0.4664	31.17
Copper	65	0.2096	0.2259	0.2181	**0.2179**	0.0082	3.743
Lead	206	0.0363	0.0377	0.0391	**0.0377**	0.0014	3.694
Lead	207	0.0393	0.0449	0.0389	**0.041**	0.0033	8.106
Lead	208	0.0385	0.0406	0.0393	**0.0395**	0.0011	2.746
Molybdenum	95	0.1022	0.1112	0.1126	**0.1087**	0.0056	5.167
Molybdenum	97	0.1134	0.0967	0.1141	**0.1081**	0.0099	9.118
Molybdenum	98	0.1073	0.1056	0.1031	**0.1053**	0.0021	2.019
Nickel	60	0.3658	0.3658	0.357	**0.3629**	0.0051	1.394
Nickel	62	15.7	19.22	31.71	**22.21**	8.414	37.88
Selenium	77	2.169	2.22	2.201	**2.197**	0.0253	1.152
Selenium	78	2.396	2.327	2.524	**2.415**	0.1002	4.146
Selenium	82	2.11	2.099	1.998	**2.069**	0.0616	2.977
Thallium	203	0.0392	0.039	0.0406	**0.0396**	0.0009	2.285
Thallium	205	0.0406	0.0402	0.0394	**0.0401**	0.0006	1.617
Zinc	66	1.06	1.022	1.02	**1.034**	0.0224	2.166
Zinc	67	0.8858	0.9385	0.9056	**0.91**	0.0266	2.927
Zinc	68	0.9746	1.009	1.009	**0.9977**	0.02	2.004

Internal Standard Factors:

Scandium	45	1.081	1.016	0.996	**1.081**	n/a	n/a
Indium	115	1.074	1.017	0.999	**1.074**	n/a	n/a
Lutetium	175	1.067	1.022	1.008	**1.067**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		ICSA MS6-94-B			Mean	SD	%RSD
TimeStamp		4/14/05 8:56					
Arsenic	75	-0.0067	-0.026	-0.0494	**-0.0274**	0.0214	78.1
Cadmium	111	0.3366	0.3389	0.3269	**0.3341**	0.0064	1.902
Cadmium	114	0.2441	0.2363	0.2407	**0.2404**	0.0039	1.635
Chromium	52	0.2062	0.2007	0.2078	**0.2049**	0.0037	1.808
Chromium	53	1.651	1.927	2.62	**2.066**	0.4992	24.16
Copper	63	1.804	2.444	2.934	**2.394**	0.5665	23.66
Copper	65	0.1907	0.1927	0.1823	**0.1886**	0.0055	2.935
Lead	206	0.1138	0.117	0.1206	**0.1171**	0.0034	2.908
Lead	207	0.1276	0.125	0.1237	**0.1254**	0.002	1.572
Lead	208	0.1196	0.1245	0.1202	**0.1214**	0.0027	2.223
Molybdenum	95	198	199.4	199.2	**198.8**	0.726	0.3651
Molybdenum	97	204.8	204	205.1	**204.6**	0.6028	0.2946
Molybdenum	98	204.5	203	203.2	**203.5**	0.8257	0.4056
Nickel	60	0.0693	0.0796	0.0795	**0.0761**	0.0059	7.733
Nickel	62	27.04	37.04	45.23	**36.44**	9.108	25
Selenium	77	1.098	1.271	1.422	**1.264**	0.1619	12.82
Selenium	78	0.5817	0.9861	1.493	**1.02**	0.4564	44.74
Selenium	82	-0.0023	-0.0635	-0.0436	**-0.0365**	0.0312	85.7
Thallium	203	0.0059	0.0047	0.0041	**0.0049**	0.0009	18.65
Thallium	205	0.0063	0.0041	0.0037	**0.0047**	0.0014	29.68
Zinc	66	0.7653	0.725	0.7683	**0.7529**	0.0242	3.211
Zinc	67	0.8509	0.9409	0.9876	**0.9265**	0.0695	7.502
Zinc	68	0.5661	0.5343	0.5653	**0.5553**	0.0181	3.267

Internal Standard Factors:

Scandium	45	1.09	1.034	1.013	**1.09**	n/a	n/a
Indium	115	1.102	1.014	0.998	**1.102**	n/a	n/a
Lutetium	175	1.102	1.084	1.062	**1.102**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		ICSAB MS6-94-C			Mean	SD	%RSD
TimeStamp		4/14/05 8:59					
Arsenic	75	20.42	20.11	20.26	**20.26**	0.1577	0.7784
Cadmium	111	19.88	19.71	19.85	**19.82**	0.0921	0.465
Cadmium	114	19.73	19.42	19.66	**19.6**	0.1622	0.8277
Chromium	52	19.23	19.32	19.24	**19.27**	0.0513	0.2662
Chromium	53	25.12	25.02	25.66	**25.27**	0.3433	1.359
Copper	63	22.8	22.81	23.52	**23.04**	0.4124	1.79
Copper	65	19.3	19.19	19.17	**19.22**	0.0686	0.3568
Lead	206	0.1117	0.1153	0.107	**0.1113**	0.0042	3.735
Lead	207	0.1133	0.1122	0.1205	**0.1154**	0.0045	3.921
Lead	208	0.1126	0.1149	0.1161	**0.1145**	0.0018	1.53
Molybdenum	95	201	198.6	200.4	**200**	1.214	0.607
Molybdenum	97	202.3	199.4	199.3	**200.3**	1.678	0.8377
Molybdenum	98	199.3	197.5	197.4	**198.1**	1.087	0.5488
Nickel	60	19.19	19.08	19.11	**19.13**	0.0595	0.311
Nickel	62	82.21	80.6	80.38	**81.06**	1.001	1.234
Selenium	77	1.676	1.633	2.189	**1.833**	0.3092	16.87
Selenium	78	2.067	1.896	1.829	**1.931**	0.1227	6.357
Selenium	82	-0.0993	-0.099	-0.2302	**-0.1428**	0.0757	52.98
Thallium	203	0.003	0.0031	0.0031	**0.0031**	0	1.478
Thallium	205	0.0034	0.0024	0.0025	**0.0028**	0.0005	19.12
Zinc	66	20.16	20.22	20.36	**20.25**	0.1008	0.498
Zinc	67	18.36	18.55	18.67	**18.53**	0.1577	0.8513
Zinc	68	19.01	18.96	19.11	**19.03**	0.0785	0.4124

Internal Standard Factors:

Scandium	45	1.089	1.023	1.001	**1.089**	n/a	n/a
Indium	115	1.072	0.975	0.965	**1.072**	n/a	n/a
Lutetium	175	1.098	1.057	1.041	**1.098**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		PBS K2554 1/5			Mean	SD	%RSD
TimeStamp		4/14/05 9:02					
Arsenic	75	0.0202	-0.0603	0.0027	**-0.0125**	0.0423	339.2
Cadmium	111	0.0067	0.0038	0.0026	**0.0043**	0.0021	48.49
Cadmium	114	0.2083	0.1961	0.1908	**0.1984**	0.009	4.52
Chromium	52	0.3243	0.3101	0.3246	**0.3196**	0.0083	2.595
Chromium	53	2.732	2.083	2.057	**2.291**	0.3823	16.69
Copper	63	2.886	6.217	2.988	**4.03**	1.894	47
Copper	65	0.0806	0.0712	0.0774	**0.0764**	0.0048	6.256
Lead	206	0.0029	0.0016	-0.001	**0.0012**	0.002	168.5
Lead	207	-0.0008	-0.003	-0.0041	**-0.0026**	0.0017	64.26
Lead	208	0.0002	-0.0002	-0.0013	**-0.0004**	0.0008	176
Molybdenum	95	0.335	0.1663	0.1116	**0.2043**	0.1164	56.98
Molybdenum	97	0.3419	0.1625	0.1039	**0.2028**	0.124	61.15
Molybdenum	98	0.3102	0.1631	0.1143	**0.1959**	0.102	52.06
Nickel	60	0.0919	0.0707	0.0782	**0.0803**	0.0108	13.4
Nickel	62	44.53	47.1	48.83	**46.82**	2.161	4.616
Selenium	77	0.5479	0.6376	0.4746	**0.5534**	0.0817	14.76
Selenium	78	1.281	1.238	1.07	**1.196**	0.1116	9.329
Selenium	82	-0.0077	-0.0953	-0.0331	**-0.0454**	0.0451	99.32
Thallium	203	0.0026	0.0021	0.0021	**0.0023**	0.0003	13.33
Thallium	205	0.0024	0.0017	0.0021	**0.0021**	0.0003	16.36
Zinc	66	0.1847	0.1749	0.1801	**0.1799**	0.0049	2.724
Zinc	67	0.2527	0.2761	0.2676	**0.2655**	0.0118	4.448
Zinc	68	0.1797	0.1723	0.1794	**0.1771**	0.0042	2.377

Internal Standard Factors:

Scandium	45	1.049	1.002	0.99	**1.049**	n/a	n/a
Indium	115	1.088	1.016	0.992	**1.088**	n/a	n/a
Lutetium	175	1.047	1.021	1.003	**1.047**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		LCSS K2554 1/20			Mean	SD	%RSD
TimeStamp		4/14/05 9:05					
Arsenic	75	93.11	91.25	93.16	**92.5**	1.091	1.179
Cadmium	111	32.93	32.52	33.15	**32.87**	0.3162	0.962
Cadmium	114	33.56	33.2	33.38	**33.38**	0.1817	0.5445
Chromium	52	70.61	66.44	66.46	**67.84**	2.404	3.544
Chromium	53	72.87	71.65	72.3	**72.27**	0.6078	0.8409
Copper	63	48.34	47.18	47.37	**47.63**	0.6257	1.314
Copper	65	46.36	45.92	46.02	**46.1**	0.2309	0.5008
Lead	206	59.47	56.57	56.8	**57.61**	1.613	2.8
Lead	207	67.18	63.92	64.14	**65.08**	1.82	2.796
Lead	208	63.82	60.92	60.79	**61.84**	1.711	2.767
Molybdenum	95	21.27	21.09	21.47	**21.28**	0.1872	0.88
Molybdenum	97	21.38	20.9	21.13	**21.13**	0.24	1.136
Molybdenum	98	21.32	21.14	21.19	**21.22**	0.0936	0.4414
Nickel	60	38.88	38.46	38.98	**38.77**	0.2738	0.7062
Nickel	62	72.68	67.29	62.52	**67.5**	5.085	7.534
Selenium	77	76.72	74.95	76.16	**75.94**	0.9015	1.187
Selenium	78	76.44	76	77.11	**76.52**	0.5618	0.7343
Selenium	82	76.43	75.14	76.45	**76.01**	0.7491	0.9856
Thallium	203	43.96	42.19	42.42	**42.86**	0.9644	2.25
Thallium	205	44.07	42.35	42.18	**42.86**	1.045	2.439
Zinc	66	128.3	126.7	129.3	**128.1**	1.329	1.037
Zinc	67	125.3	124	125.2	**124.9**	0.7522	0.6025
Zinc	68	128.1	126.8	128.4	**127.7**	0.8041	0.6294

Internal Standard Factors:							
Scandium	45	0.965	0.901	0.891	**0.965**	n/a	n/a
Indium	115	0.974	0.895	0.884	**0.974**	n/a	n/a
Lutetium	175	1.035	0.928	0.915	**1.035**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		K2554-01 1/5			Mean	SD	%RSD
TimeStamp		4/14/05 9:07					
Arsenic	75	13.73	13.42	13.43	**13.53**	0.1767	1.306
Cadmium	111	0.3039	0.2962	0.2817	**0.2939**	0.0112	3.821
Cadmium	114	0.3517	0.3403	0.3483	**0.3468**	0.0058	1.676
Chromium	52	110	108.8	108.6	**109.1**	0.7482	0.6857
Chromium	53	99.72	98.88	98.74	**99.11**	0.5294	0.5341
Copper	63	47.34	46.95	46.85	**47.05**	0.2587	0.5498
Copper	65	47.26	46.48	46.19	**46.64**	0.5548	1.189
Lead	206	24.3	23.95	22.8	**23.69**	0.7828	3.305
Lead	207	26.85	26.61	25.46	**26.31**	0.7398	2.812
Lead	208	25.95	25.69	24.39	**25.34**	0.8373	3.304
Molybdenum	95	1.176	1.127	1.133	**1.145**	0.0267	2.328
Molybdenum	97	1.146	1.118	1.107	**1.124**	0.0202	1.796
Molybdenum	98	1.178	1.155	1.117	**1.15**	0.0308	2.682
Nickel	60	74.61	73.44	73.4	**73.82**	0.6871	0.9309
Nickel	62	102.9	101.7	105	**103.2**	1.637	1.586
Selenium	77	2.601	2.446	2.553	**2.533**	0.0792	3.127
Selenium	78	1.251	1.161	1.166	**1.192**	0.0505	4.238
Selenium	82	0.9171	0.7555	1.017	**0.8964**	0.1318	14.7
Thallium	203	0.2917	0.279	0.263	**0.2779**	0.0144	5.177
Thallium	205	0.289	0.2695	0.2536	**0.2707**	0.0177	6.548
Zinc	66	111.2	110.6	111.3	**111**	0.4035	0.3634
Zinc	67	110.4	109	108.7	**109.4**	0.9119	0.8339
Zinc	68	112.1	111.3	111.3	**111.6**	0.4451	0.3988

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Internal Standard Factors:

Scandium	45	0.744	0.696	0.688	**0.744**	n/a	n/a
Indium	115	0.922	0.838	0.814	**0.922**	n/a	n/a
Lutetium	175	1.012	0.929	0.876	**1.012**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		K2554-01 1/10			Mean	SD	%RSD
TimeStamp		4/14/05 9:14					
Arsenic	75	7.519	7.533	7.454	**7.502**	0.0422	0.5623
Cadmium	111	0.1535	0.1416	0.159	**0.1514**	0.0089	5.868
Cadmium	114	0.1755	0.178	0.1844	**0.1793**	0.0046	2.566
Chromium	52	59.48	57.57	55.36	**57.47**	2.063	3.589
Chromium	53	58.98	58.92	58.92	**58.94**	0.033	0.056
Copper	63	27.02	27.28	28.13	**27.48**	0.5824	2.12
Copper	65	26.44	26.44	26.41	**26.43**	0.016	0.0605
Lead	206	11.67	11.57	11.22	**11.49**	0.2353	2.048
Lead	207	13.01	12.94	12.52	**12.83**	0.2689	2.097
Lead	208	12.53	12.44	12.08	**12.35**	0.2378	1.925
Molybdenum	95	0.5852	0.5872	0.5776	**0.5833**	0.0051	0.8721
Molybdenum	97	0.5597	0.5727	0.5492	**0.5605**	0.0118	2.108
Molybdenum	98	0.5702	0.5725	0.5625	**0.5684**	0.0052	0.9199
Nickel	60	42.81	42.7	42.51	**42.67**	0.1492	0.3497
Nickel	62	64.94	64.85	82.95	**70.91**	10.42	14.7
Selenium	77	1.403	1.263	1.295	**1.321**	0.0735	5.567
Selenium	78	0.8556	0.8308	0.7906	**0.8256**	0.0328	3.973
Selenium	82	0.4558	0.5148	0.5064	**0.4923**	0.0319	6.482
Thallium	203	0.1267	0.1275	0.1282	**0.1275**	0.0008	0.601
Thallium	205	0.1315	0.1294	0.1254	**0.1287**	0.0031	2.412
Zinc	66	64.57	65.15	64.68	**64.8**	0.3067	0.4732
Zinc	67	62.83	63.32	62.75	**62.97**	0.3087	0.4903
Zinc	68	64.42	64.03	64.29	**64.25**	0.1968	0.3063

Internal Standard Factors:

Scandium	45	0.908	0.833	0.806	**0.908**	n/a	n/a
Indium	115	1.027	0.923	0.889	**1.027**	n/a	n/a
Lutetium	175	1.096	0.986	0.922	**1.096**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		K2554-01D 1/10			Mean	SD	%RSD
TimeStamp		4/14/05 9:16					
Arsenic	75	5.639	5.572	5.669	**5.627**	0.0499	0.8865
Cadmium	111	0.259	0.2505	0.246	**0.2518**	0.0066	2.619
Cadmium	114	0.2814	0.2723	0.2715	**0.275**	0.0055	2.01
Chromium	52	62.65	62.35	62.42	**62.47**	0.1534	0.2455
Chromium	53	62.53	59.69	60.66	**60.96**	1.444	2.368
Copper	63	27.05	26.85	26.9	**26.93**	0.1031	0.3827
Copper	65	26.62	25.95	26.31	**26.29**	0.3326	1.265
Lead	206	14.08	14.11	14.02	**14.07**	0.0462	0.3281
Lead	207	15.87	15.71	15.78	**15.79**	0.0832	0.5268
Lead	208	15.27	15.15	15.11	**15.18**	0.0816	0.5378
Molybdenum	95	0.3856	0.3849	0.385	**0.3851**	0.0004	0.0958
Molybdenum	97	0.3853	0.3685	0.3724	**0.3754**	0.0088	2.345
Molybdenum	98	0.3819	0.3834	0.3842	**0.3832**	0.0012	0.3102
Nickel	60	43.55	42.39	42.58	**42.84**	0.6218	1.452
Nickel	62	66.16	66.07	66.32	**66.18**	0.1248	0.1886
Selenium	77	1.289	1.181	1.371	**1.28**	0.0954	7.451
Selenium	78	0.7158	0.6433	0.7184	**0.6925**	0.0426	6.157
Selenium	82	0.4351	0.6292	0.5551	**0.5398**	0.098	18.15
Thallium	203	0.1401	0.1378	0.1347	**0.1375**	0.0027	1.987
Thallium	205	0.137	0.1375	0.1375	**0.1374**	0.0003	0.2288
Zinc	66	73.9	72.26	73.25	**73.13**	0.8256	1.129
Zinc	67	71.88	70.35	71.24	**71.16**	0.7727	1.086
Zinc	68	73.37	72.41	72.88	**72.89**	0.4835	0.6634

Internal Standard Factors:

Scandium	45	0.832	0.782	0.776	**0.832**	n/a	n/a
Indium	115	0.95	0.881	0.862	**0.95**	n/a	n/a
Lutetium	175	1.011	0.942	0.922	**1.011**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		K2554-01S 1/25			Mean	SD	%RSD
TimeStamp		4/14/05 9:19					
Arsenic	75	39.17	39.5	38.62	**39.09**	0.4435	1.134
Cadmium	111	3.996	4.078	4.007	**4.027**	0.0445	1.106
Cadmium	114	4.044	4.036	4.03	**4.037**	0.0069	0.1721
Chromium	52	38.49	38.55	38.33	**38.46**	0.1113	0.2895
Chromium	53	36.02	35.84	35.86	**35.91**	0.0956	0.2662
Copper	63	30.28	29.79	29.99	**30.02**	0.2427	0.8086
Copper	65	29.32	29.11	29.08	**29.17**	0.1332	0.4565
Lead	206	47.88	46.2	46.57	**46.88**	0.8854	1.888
Lead	207	53.5	51.53	52.08	**52.37**	1.018	1.943
Lead	208	50.72	49.05	49.39	**49.72**	0.8846	1.779
Molybdenum	95	27.94	28.57	28.05	**28.19**	0.3389	1.202
Molybdenum	97	27.92	27.91	28.07	**27.97**	0.0907	0.3242
Molybdenum	98	27.71	28.05	28.23	**28**	0.2645	0.9447
Nickel	60	53.7	53.35	52.98	**53.34**	0.3583	0.6717
Nickel	62	75.62	72.5	73.5	**73.87**	1.593	2.156
Selenium	77	37.59	36.4	37.24	**37.08**	0.6088	1.642
Selenium	78	36.96	37.58	36.91	**37.15**	0.3733	1.005
Selenium	82	37.58	37.12	37.29	**37.33**	0.2353	0.6304
Thallium	203	39.94	38.56	38.75	**39.08**	0.7474	1.912
Thallium	205	40.13	38.54	38.75	**39.14**	0.8644	2.209
Zinc	66	64.06	63.38	63.55	**63.66**	0.3542	0.5563
Zinc	67	71.67	70.6	70.55	**70.94**	0.6348	0.8949
Zinc	68	69.51	69.1	69.18	**69.27**	0.2178	0.3144

Internal Standard Factors:

Scandium	45	0.898	0.855	0.837	**0.898**	n/a	n/a
Indium	115	0.935	0.887	0.868	**0.935**	n/a	n/a
Lutetium	175	0.997	0.913	0.901	**0.997**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		PBS K2172 1/5			Mean	SD	%RSD
TimeStamp		4/14/05 9:29					
Arsenic	75	-0.06	-0.013	-0.0077	**-0.0269**	0.0288	107
Cadmium	111	0.0025	0.0034	0.0025	**0.0028**	0.0005	19.12
Cadmium	114	0.2064	0.207	0.2033	**0.2056**	0.002	0.957
Chromium	52	0.3088	0.3124	0.3092	**0.3101**	0.002	0.6382
Chromium	53	-2.173	-2.484	-2.199	**-2.285**	0.1728	7.56
Copper	63	0.0368	0.0656	0.0242	**0.0422**	0.0212	50.24
Copper	65	0.0563	0.0609	0.0468	**0.0547**	0.0072	13.15
Lead	206	0.0009	-0.0009	-0.0014	**-0.0004**	0.0012	275.5
Lead	207	-0.0008	-0.0018	-0.0006	**-0.0011**	0.0006	61.65
Lead	208	-0.0005	-0.0014	-0.0011	**-0.001**	0.0004	41.85
Molybdenum	95	0.016	0.0126	0.0127	**0.0138**	0.0019	14.13
Molybdenum	97	0.006	0.004	0.0074	**0.0058**	0.0017	29.11
Molybdenum	98	0.0146	0.0138	0.0128	**0.0137**	0.0009	6.584
Nickel	60	0.0829	0.0718	0.0829	**0.0792**	0.0064	8.105
Nickel	62	1.952	2.076	1.952	**1.993**	0.0717	3.598
Selenium	77	0.0786	-0.1579	-0.0846	**-0.0546**	0.1211	221.6
Selenium	78	0.3134	0.2598	0.3266	**0.2999**	0.0354	11.79
Selenium	82	0.1081	0.1247	0.0783	**0.1037**	0.0235	22.65
Thallium	203	0.0013	0.0019	0.0015	**0.0016**	0.0003	18.86
Thallium	205	0.0007	0.0011	0.0014	**0.0011**	0.0003	31.66
Zinc	66	0.1527	0.1656	0.148	**0.1554**	0.0091	5.853
Zinc	67	-0.0944	-0.1298	-0.0882	**-0.1042**	0.0225	21.56
Zinc	68	0.1625	0.1627	0.1324	**0.1525**	0.0174	11.44

Internal Standard Factors:

Scandium	45	1.004	0.967	0.949	**1.004**	n/a	n/a
Indium	115	1.034	0.985	0.963	**1.034**	n/a	n/a
Lutetium	175	1.002	0.978	0.953	**1.002**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		CCV2 MS6-95-D			Mean	SD	%RSD
TimeStamp		4/14/05 9:32					
Arsenic	75	25.6	25.77	25.35	**25.57**	0.2132	0.8338
Cadmium	111	24.97	25.02	24.94	**24.97**	0.0393	0.1574
Cadmium	114	25.13	25.11	24.82	**25.02**	0.1723	0.6885
Chromium	52	25.43	25.3	25.4	**25.38**	0.0702	0.2766
Chromium	53	23.34	23.22	23.31	**23.29**	0.0648	0.278
Copper	63	25.66	25.82	25.57	**25.68**	0.1257	0.4893
Copper	65	25.39	25.71	25.41	**25.5**	0.1822	0.7145
Lead	206	24.66	24.99	25.08	**24.91**	0.2232	0.8962
Lead	207	24.54	25.44	25.25	**25.08**	0.4734	1.888
Lead	208	24.63	25.29	25.14	**25.02**	0.3429	1.37
Molybdenum	95	25.43	25.26	25.26	**25.31**	0.0964	0.3808
Molybdenum	97	25.08	25.14	25.09	**25.1**	0.03	0.1194
Molybdenum	98	24.93	25.09	25.03	**25.02**	0.0802	0.3206
Nickel	60	25.51	25.56	25.29	**25.45**	0.1443	0.567
Nickel	62	29.5	28.87	28.83	**29.07**	0.3762	1.294
Selenium	77	25.19	25.8	25.41	**25.47**	0.3124	1.227
Selenium	78	26.16	25.8	25.59	**25.85**	0.288	1.114
Selenium	82	25.7	25.9	25.62	**25.74**	0.1405	0.546
Thallium	203	24.71	25.3	25.11	**25.04**	0.2964	1.184
Thallium	205	24.82	25.35	25.28	**25.15**	0.2906	1.155
Zinc	66	25.2	25.53	25.47	**25.4**	0.1751	0.6895
Zinc	67	25.05	25.31	24.71	**25.02**	0.3001	1.199
Zinc	68	25.23	25.34	25.37	**25.31**	0.0756	0.2986

Internal Standard Factors:

Scandium	45	1.035	0.986	0.977	**1.035**	n/a	n/a
Indium	115	1.031	0.967	0.946	**1.031**	n/a	n/a
Lutetium	175	1.023	0.986	0.972	**1.023**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-14-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500452

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		4/14/05 9:36					
Arsenic	75	0.0112	-0.0226	-0.1045	**-0.0386**	0.0595	154.1
Cadmium	111	0.0037	0.0036	0.0035	**0.0036**	0.0001	2.692
Cadmium	114	0.0031	0.0042	0.0019	**0.0031**	0.0011	36.87
Chromium	52	0.0402	0.0455	0.0416	**0.0424**	0.0028	6.501
Chromium	53	-2.452	-2.378	-2.146	**-2.325**	0.1595	6.86
Copper	63	0.4145	0.5583	1.126	**0.6994**	0.3759	53.75
Copper	65	0.0353	0.0272	0.0269	**0.0298**	0.0048	16
Lead	206	0.0118	0.0098	0.0095	**0.0104**	0.0013	12.33
Lead	207	0.0101	0.006	0.0103	**0.0088**	0.0024	27.22
Lead	208	0.0108	0.0096	0.0098	**0.0101**	0.0007	6.717
Molybdenum	95	0.0377	0.0274	0.0201	**0.0284**	0.0088	31.1
Molybdenum	97	0.0456	0.0201	0.0087	**0.0248**	0.0189	76.27
Molybdenum	98	0.0386	0.0237	0.0171	**0.0265**	0.011	41.58
Nickel	60	0.0807	0.0761	0.0524	**0.0697**	0.0152	21.75
Nickel	62	8.657	11.12	18.68	**12.82**	5.222	40.74
Selenium	77	-0.1513	-0.0769	0.2954	**0.0224**	0.2393	1069
Selenium	78	0.4685	0.3621	0.5311	**0.4539**	0.0854	18.83
Selenium	82	0.0633	-0.0227	-0.0598	**-0.0064**	0.0632	989.2
Thallium	203	0.0064	0.0041	0.0035	**0.0047**	0.0015	32.79
Thallium	205	0.0064	0.0043	0.0024	**0.0043**	0.002	46.2
Zinc	66	0.0983	0.1099	0.1071	**0.1051**	0.0061	5.765
Zinc	67	-0.172	-0.1421	-0.149	**-0.1544**	0.0157	10.14
Zinc	68	0.0927	0.0995	0.1015	**0.0979**	0.0046	4.706

Internal Standard Factors:

Scandium	45	1.094	1.034	1.015	**1.094**	n/a	n/a
Indium	115	1.119	1.03	1.012	**1.119**	n/a	n/a
Lutetium	175	1.074	1.024	1	**1.074**	n/a	n/a

Service Request # K2502554 (HCl Digest)
Calibration 04-15-05A
QC in calibration 04-15-05A
QC Service Request # K2502554

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	✓		
2. ICV within 10 % of true value	✓		
3. CCV's in control	✓		
4. CCB's and/or ICB's below MRL	✓		
5. Method blank below MRL	✓		
6. LCS in control	✓		
7. Spike and duplicate in control	✓		
8. All analytes within instrument linear range	✓		
9. Adequate rinse out time allowed	✓		
10. Internal standards in control	✓		
11. Interferences checked	✓		
12. Se over MRL			✓
13. CRA run	✓		
14. ICSA and ICSAB in control			✓
15. Serial dilution run			✓
16. Post spike in control			✓

Comments:

Primary Review by SC Date 4/19/05
Secondary Review by [illegible] Date 4/19/05
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution
1	Calibration Blank	Blank	0 kg	0 ml	1.00
2	25 ppb Std. MS6-96-C	Fully Quant Standard	0 kg	0 ml	1.00
3	ICV MS6-62-A	Unknown	0 kg	0 ml	1.00
4	CCV1 MS6-96-C	Unknown	0 kg	0 ml	1.00
5	ICB	Unknown	0 kg	0 ml	1.00
6	CCB1	Unknown	0 kg	0 ml	1.00
7	CRA MS6-90-F	Unknown	0 kg	0 ml	1.00
8	ICSA MS6-93-A	Unknown	0 kg	0 ml	1.00
9	ICSAB MS6-93-B	Unknown	0 kg	0 ml	1.00
10	PBS K2554 1/5	Unknown	0 kg	0 ml	1.00
11	K2554-01 1/5	Unknown	0 kg	0 ml	1.00
12	K2554-01D 1/5	Unknown	0 kg	0 ml	1.00
13	K2554-01S 1/5	Unknown	0 kg	0 ml	1.00
14	LCSS K2554 1/20	Unknown	0 kg	0 ml	1.00
15	CCV2 MS6-96-C	Unknown	0 kg	0 ml	1.00
16	CCB2	Unknown	0 kg	0 ml	1.00
17	PBS K2172 1/5	Unknown	0 kg	0 ml	1.00
18	K2172-02 1/5	Unknown	0 kg	0 ml	1.00
19	K2172-01 1/5	Unknown	0 kg	0 ml	1.00
20	K2172-01D 1/5	Unknown	0 kg	0 ml	1.00
21	K2172-01L 1/5 X 1/5	Unknown	0 kg	0 ml	1.00
22	K2172-01A 1/5 +10	Unknown	0 kg	0 ml	1.00
23	K2172-01S 1/5	Unknown	0 kg	0 ml	1.00
24	LCSS K2172 1/20	Unknown	0 kg	0 ml	1.00
25	CCV3 MS6-96-C	Unknown	0 kg	0 ml	1.00
26	CCB3	Unknown	0 kg	0 ml	1.00

Instrument Setup - Sample Configuration

Sample	Configuration	Date
All Samples	jchan	7:51:20 4/15/05

Instrument Setup - Configurations

Configuration Name - jchan
Description - PQExcell CCT Sim Default
Date - 7:51:20 4/15/05
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-645.00
Lens1	7.70
Lens2	-60.50
Lens3	-93.20
Pole Bias	1.00
Sampling Depth	410.00
Horizontal	-55.00
Vertical	66.00
Cool	13.00
Auxiliary	0.70
Nebuliser	0.84
Forward power	1,385.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-32.20
Focus	18.50

ExCell Mass Calibration Date: 4/15/05

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include
7.016	1635	0.613	0.092	TRUE
23.985	5936	0.715	0.023	TRUE
26.982	6696	0.664	0.012	TRUE
43.956	11013	0.715	-0.007	TRUE
44.956	11266	0.766	-0.014	TRUE
50.944	12787	0.766	-0.03	TRUE
51.94	13041	0.817	-0.03	TRUE
53.949	13554	0.766	-0.024	TRUE
55.935	14061	0.765	-0.02	TRUE
56.935	14315	0.817	-0.023	TRUE
57.934	14568	0.765	-0.029	TRUE
58.933	14815	0.765	-0.058	TRUE
75.92	19157	0.765	-0.005	TRUE
114.904	29104	0.714	0.025	TRUE
136.906	34726	0.662	0.058	TRUE
137.906	34973	0.764	0.025	TRUE
139.905	35480	0.764	0.012	TRUE
141.908	35994	0.713	0.023	TRUE
174.941	44424	0.662	0.007	TRUE
202.972	51587	0.661	0.009	TRUE
204.972	52094	0.661	-0.007	TRUE
205.974	52348	0.712	-0.015	TRUE
206.976	52614	0.661	0.024	TRUE
207.977	52861	0.661	-0.011	TRUE
208.98	53121	0.661	0.003	TRUE
238.051	60544	0.661	-0.039	TRUE

Excluded In Calib | Excluded In Results | Peak Run Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard E-Calibration Edited I-Invalid Calibration V-Valley Integration Failed
F-Interference Correction Failed T-Tripped P-Pulse Counting M-Result Over Max

Run	Label	TimeStamp	5Bkg	7Li	9Be	59Co	115In	208Pb
1	Stability 4/15/05	4/15/05 8:09:02 AM	(P)0.500	(P)9505.662	(P)3250.704	(P)37754.829	(P)61480.553	(P)28189.287
2	Stability 4/15/05	4/15/05 8:10:05 AM	(P)0.333	(P)9752.996	(P)3356.395	(P)38181.630	(P)63955.898	(P)28621.813
3	Stability 4/15/05	4/15/05 8:11:07 AM	(P)0.167	(P)9807.533	(P)3434.914	(P)38709.548	(P)64410.296	(P)29350.789
4	Stability 4/15/05	4/15/05 8:12:10 AM	(P)0.000	(P)10258.683	(P)3510.765	(P)39739.200	(P)66565.609	(P)30098.678
5	Stability 4/15/05	4/15/05 8:13:12 AM	(P)0.667	(P)10606.439	(P)3559.944	(P)40694.053	(P)68079.898	(P)31348.028
	Mean of Stability 4/1	4/15/05 8:08:24 AM	(P)0.333	(P)9986.263	(P)3422.544	(P)39015.852	(P)64898.451	(P)29521.719
	SD of Stability 4/15/05		(P)0.264	(P)440.502	(P)123.207	(P)1195.776	(P)2535.239	(P)1253.267
	%RSD of Stability 4/		(P)79.057	(P)4.411	(P)3.600	(P)3.065	(P)3.906	(P)4.245

Run	Label	TimeStamp	209Bi	220Bkg	238U
1	Stability 4/15/05	4/15/05 8:09:02 AM	(P)49026.993	(P)0.167	(P)43560.160
2	Stability 4/15/05	4/15/05 8:10:05 AM	(P)50021.765	(P)0.667	(P)43988.801
3	Stability 4/15/05	4/15/05 8:11:07 AM	(P)50756.522	(P)0.333	(P)44886.931
4	Stability 4/15/05	4/15/05 8:12:10 AM	(P)52635.303	(P)0.333	(P)46567.803
5	Stability 4/15/05	4/15/05 8:13:12 AM	(P)53873.570	(P)0.000	(P)47973.100
	Mean of Stability 4/1	4/15/05 8:08:24 AM	(P)51262.831	(P)0.300	(P)45395.359
	SD of Stability 4/15/05		(P)1968.197	(P)0.247	(P)1845.551
	%RSD of Stability 4/		(P)3.839	(P)82.402	(P)4.066

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Analytical Batch KA0500455

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name: TimeStamp		Calibration Blank 4/15/05 8:28			Mean	SD	%RSD
Antimony	121	-0.001	0.0012	-0.0003	**0**	0.0011	0
Antimony	123	0.0003	0.0012	-0.0015	**0**	0.0014	0
Silver	107	0.0002	0.0001	-0.0003	**0**	0.0002	0
Silver	109	0	-0.0001	0.0001	**0**	0.0001	0

JC 4/15/05

Internal Standard Factors:

Indium	115	1.018	0.997	0.985	**1.018** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name: TimeStamp		25 ppb Std. MS6-96-C 4/15/05 8:30			Mean	SD	%RSD
Antimony	121	24.81	25.19	25	**25**	0.1924	0.7694
Antimony	123	24.82	24.89	25.3	**25**	0.2583	1.033
Silver	107	24.64	25.14	25.22	**25**	0.3171	1.268
Silver	109	24.75	25.06	25.18	**25**	0.2217	0.8867

Internal Standard Factors:

Indium	115	1.067	1.029	1.011	**1.067** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name:		ICV MS6-62-A			Mean	SD	%RSD
TimeStamp		4/15/05 8:31					
Antimony	121	25.15	25.67	25.58	**25.47**	0.2778	1.091
Antimony	123	25.47	25.9	25.54	**25.64**	0.2304	0.8985
Silver	107	12.74	12.74	12.7	**12.73**	0.0241	0.1896
Silver	109	12.72	12.78	12.63	**12.71**	0.0724	0.5694

Internal Standard Factors:

Indium	115	1.097	1.052	1.036	**1.097** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name: / TimeStamp		CCV1 MS6-96-C 4/15/05 8:33			Mean	SD	%RSD
Antimony	121	24.91	25.12	25.31	**25.11**	0.2013	0.8016
Antimony	123	25.41	25.23	25.27	**25.3**	0.093	0.3677
Silver	107	24.97	25.1	24.81	**24.96**	0.148	0.5931
Silver	109	25.18	25.02	24.94	**25.05**	0.1237	0.4938

Internal Standard Factors:

Indium	115	1.1	1.038	1.025	**1.1** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name:		ICB			Mean	SD	%RSD
TimeStamp		4/15/05 8:34					
Antimony	121	0.0178	0.0127	0.0104	**0.0136**	0.0038	27.52
Antimony	123	0.0193	0.0119	0.0092	**0.0135**	0.0053	39.02
Silver	107	0.0038	0.0033	0.0019	**0.003**	0.001	32.44
Silver	109	0.0044	0.0016	0.0013	**0.0024**	0.0017	71.24

Internal Standard Factors:

Indium	115	1.125	1.081	1.059	**1.125** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		4/15/05 8:35					
Antimony	121	0.007	0.007	0.0077	**0.0072**	0.0004	5.624
Antimony	123	0.009	0.0048	0.0039	**0.0059**	0.0027	45.52
Silver	107	0.0017	0.0012	0.0012	**0.0013**	0.0003	20.44
Silver	109	0.0006	0.001	0.0006	**0.0007**	0.0002	33.17

Internal Standard Factors:

Indium	115	1.095	1.07	1.054	**1.095** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name: / TimeStamp		CRA MS6-90-F 4/15/05 8:36			Mean	SD	%RSD
Antimony	121	0.1096	0.1072	0.1077	**0.1082**	0.0013	1.164
Antimony	123	0.1077	0.1155	0.1108	**0.1113**	0.0039	3.539
Silver	107	0.0427	0.0398	0.0422	**0.0416**	0.0016	3.747
Silver	109	0.0392	0.0411	0.0391	**0.0398**	0.0011	2.768

Internal Standard Factors:

Indium	115	1.092	1.057	1.037	**1.092** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name:		ICSA MS6-93-A			Mean	SD	%RSD
TimeStamp		4/15/05 8:38					
Antimony	121	0.09	0.0963	0.0918	**0.0927**	0.0032	3.458
Antimony	123	0.0948	0.0915	0.0961	**0.0941**	0.0024	2.506
Silver	107	0.004	0.0036	0.0045	**0.004**	0.0004	10.22
Silver	109	0.0035	0.0028	0.0023	**0.0029**	0.0006	20.68

Internal Standard Factors:

Indium	115	1.275	1.223	1.191	**1.275** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name:		ICSAB MS6-93-B			Mean	SD	%RSD
TimeStamp		4/15/05 8:39					
Antimony	121	0.1065	0.108	0.1066	**0.1071**	0.0008	0.7911
Antimony	123	0.1082	0.1082	0.1059	**0.1074**	0.0013	1.241
Silver	107	18.12	18.23	18.36	**18.24**	0.1217	0.6673
Silver	109	18.48	18.36	18.51	**18.45**	0.0785	0.4256

Internal Standard Factors:

Indium	115	1.249	1.193	1.181	**1.249** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name: TimeStamp		PBS K2554 1/5 4/15/05 8:41			Mean	SD	%RSD
Antimony	121	0.0111	0.0084	0.01	**0.0098**	0.0013	13.52
Antimony	123	0.0043	0.0066	0.0062	**0.0057**	0.0012	20.86
Silver	107	0.0011	0.0021	0.0015	**0.0016**	0.0005	33.11
Silver	109	0.0015	0.0014	0.0009	**0.0013**	0.0003	24.15

Internal Standard Factors:

Indium	115	1.187	1.131	1.105	**1.187** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name:		K2554-01 1/5			Mean	SD	%RSD
TimeStamp		4/15/05 8:45					
Antimony	121	0.2122	0.2179	0.2165	**0.2155**	0.003	1.385
Antimony	123	0.2054	0.2155	0.2103	**0.2104**	0.005	2.398
Silver	107	5.297	5.331	5.4	**5.343**	0.0523	0.9783
Silver	109	5.347	5.348	5.352	**5.349**	0.0028	0.0518

Internal Standard Factors:

Indium	115	1.14	1.087	1.048	**1.14**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name:		K2554-01D 1/5			Mean	SD	%RSD
TimeStamp		4/15/05 8:46					
Antimony	121	0.2207	0.2123	0.2168	**0.2166**	0.0042	1.94
Antimony	123	0.2115	0.2015	0.2069	**0.2066**	0.005	2.428
Silver	107	5.313	5.33	5.29	**5.311**	0.0201	0.3785
Silver	109	5.375	5.327	5.305	**5.336**	0.0356	0.6675

Internal Standard Factors:

Indium	115	1.07	1.031	0.999	**1.07** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name: / TimeStamp		K2554-01S 1/5 4/15/05 8:47			Mean	SD	%RSD
Antimony	121	65.85	66.14	66.88	**66.29**	0.5314	0.8017
Antimony	123	67.48	67.25	67.91	**67.55**	0.3333	0.4935
Silver	107	19.86	19.69	19.65	**19.73**	0.1086	0.5506
Silver	109	19.79	19.72	19.64	**19.71**	0.0762	0.3864

Internal Standard Factors:

Indium	115	1.094	1.051	1.031	**1.094**	n/a	n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name: TimeStamp		LCSS K2554 1/20 4/15/05 8:55			Mean	SD	%RSD
Antimony	121	14.64	14.47	14.6	**14.57**	0.0916	0.629
Antimony	123	14.96	14.81	14.57	**14.78**	0.2009	1.36
Silver	107	46.18	46.64	45.81	**46.21**	0.4155	0.8991
Silver	109	46.61	46.46	46.12	**46.4**	0.2538	0.547

Internal Standard Factors:

Indium	115	1.13	1.057	1.02	**1.13** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name:		CCV2 MS6-96-C			Mean	SD	%RSD
TimeStamp		4/15/05 8:56					
Antimony	121	25.03	24.61	25.26	**24.96**	0.3301	1.322
Antimony	123	25.21	24.87	25.73	**25.27**	0.4337	1.716
Silver	107	24.81	25.04	25.28	**25.04**	0.238	0.9505
Silver	109	24.72	25.04	25.43	**25.06**	0.3533	1.41

Internal Standard Factors:

Indium	115	1.132	1.084	1.079	**1.132** n/a		n/a

Instrument ID: Thermo Elemental Excell
Experiment: 04-15-05A
Units: µg/L (ppb)

Method: EPA 6020/200.8
Analyst: Jim Chan
Analysis Lot # : KA0500455

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		4/15/05 8:58					
Antimony	121	0.0131	0.0083	0.0082	**0.0099**	0.0028	28.2
Antimony	123	0.0157	0.0112	0.0062	**0.011**	0.0047	42.83
Silver	107	0.0087	0.0068	0.0046	**0.0067**	0.0021	30.72
Silver	109	0.0093	0.0059	0.0046	**0.0066**	0.0024	37.03

Internal Standard Factors:

Indium	115	1.179	1.121	1.101	**1.179** n/a		n/a